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RECENT CURRICULUM DEVELOPMENTS AT THE MIDDLE LEVEL OF FRENCH, WEST GERMAN, AND ITALIAN SCHOOLS.

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FRANCE, WEST GERMANY, AND ITALY ARE SUBJECTS OF AN INTERNATIONAL MIDDLE SCHOOL STUDY TO ACQUAINT AMERICAN EDUCATORS WITH WHAT THE EUROPEAN SCHOOL AUTHORITIES CONSIDER GOOD SCHOOL PROGRAMS, AND WITH THE DIRECTIONS IN WHICH THE AUTHORITIES ARE MOVING TO ADJUST SCHOOLS TO THE NEEDS OF MODERN SOCIETY. INFORMATION FOR THE STUDY WAS OBTAINED BY THE AUTHOR THROUGH INTERVIEWS, PERSONAL CONTACTS, LITERATURE, AND SCHOOL AND STATE RECORDS. MIDDLE SCHOOL CURRICULA IS DISCUSSED IN TERMS OF (1) RECENT REFORMS, (2) THE STRUCTURE AND CHARACTERISTICS OF THE SCHOOL SYSTEM, (3) THE NATURE OF AND PLANNING OF THE CURRICULUM, (4) CHANGES IN GENERAL CURRICULAR POLICIES, (5) INNOVATION, (6) DEVELOPMENTS IN SUBJECT PROGRAMS, AND (7) QUANTITATIVE COMPARISONS OF CURRICULUM PROGRAMS. APPENDICES CONTAIN A BIBLIOGRAPHY, DIAGRAMS OF THE SCHOOL SYSTEMS, AND THE CURRICULA. (HW)

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A Report
by

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Brooklyn College
of the City University of New York

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Brooklyn College
of the City University of New York

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New York, 1967

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PREFACE

Little is known in this country about the nature and the details of school curricula in Western Europe, although many a word of praise is spoken--especially in polemic context--about the "superiority" of European schools. Research and writing in the field of comparative education have largely concentrated on the social dimensions of the schools (access to secondary schools, enrollment ratios, structural reforms, politics of education). But what is being taught, how the school programs are arranged--these questions have been generally neglected. The present study is an attempt at shedding some light on the official school programs in three European countries.

France, West Germany, and Italy have been selected not only because I know them well and speak their languages, but chiefly because they are the three largest and leading Western nations on the continent. Their cultural and economic achievements are of worldwide renown and influence. Their contacts among each other have been, for centuries, intensive and not at all primarily bellicose as history textbooks may lead us to believe. All three are very proud of their European character and today collaborate in strengthening the unity of Europe.

The three countries resemble each other in many respects that are relevant for education. Their cultures have common roots and comparable levels. Their industrial development (though slower in Italy) is similar as are the social and material aspirations of the peoples. Their political systems (multi-party, ideology-based) resemble each other more than each resembles that of say, England or the U.S. Although West Germany is a federal nation, the administrative features within its Länder (= states) are similarly centralized as those of France or Italy on the national level. The ministries of education, for example, are powerful authorities of central control. Among the eleven Länder I selected four that represent a fair range of urban and rural, Catholic and Protestant elements: Berlin, Hesse, Northrhine-Westphalia, Bavaria.

The school systems of the three countries share similar intellectual and social foundations as well as the problems resulting from this heritage. Their public schools received their basic character during the mid-nineteenth century, an era of social class divisions which pervaded the schools and all ideas on suitable education for the different strata of population. In recent years these nations have begun attempts of adjusting their school systems to the needs of modern times. Similarly motivated by socio-economic changes, the three countries are now aiming to open secondary education to larger numbers of their youth. After some preliminary steps, experiments, and statements of principles, during the 1950's, the governments of the three countries almost simultaneously (in 1963-64) but independently initiated concrete reforms in their school systems. These reforms are of great social significance: they replace the age-old policy of restricted access to secondary schools--the traditional instrument of class differentiation--by a policy of broadening the access to secondary education. To accomplish their objectives, however, France, West Germany, and Italy chose somewhat different paths.

The changes focus on the middle level (grades 5 or 6 to 8), i.e., the years in which the decisions on further school careers are made. This is why this study concentrates on the curriculum of the middle level, examining the development of the school programs that accompany the structural changes of the reforms. Mainly two questions guide the analysis of the official school programs and directives: 1) in what manner and to what extent do the revised patterns concur with the avowed goal of broadening educational opportunities, and 2) to what extent do the revisions include modernization, i.e., attention to training in contemporary modes of thought, and in skills and knowledge needed for competent living in our times?

The comparative analysis applied in this study seems useful in demonstrating the range of different approaches in coping with analogous problems under comparable conditions. It also serves to highlight the common elements of the reform processes: this, in turn, may lead to cautious generalizations about trends that seem typical for continental (west) European school developments. The extent of comparison has generally been limited to description, analysis, and interpretation of the programs, omitting the explanation of the causes of differences as functions of the complex variables in the matrixes of national characteristics. Causal explanation would have required much more attention to these "background" variables in the three societies.

It should furthermore be clearly stated that this study assesses the normative dimensions, not the actual uses of the curricula. The picture of "reality", in its many varieties, has quite a different relevance--one of interest to social scientists and, for example, to specialists in educational administration. This study deliberately concentrates on the ideas and plans that give shape to the instructional work of the schools. These ideas and developments are assumed to be of interest to American educators. If the results as shown in this report do not appear startling or greatly inspiring, one should keep in mind that we do not deal with frontiers of European education--which should also be investigated--but with blueprints for the broad and slow-moving national school systems. The rank order of importance calls first for pieces of groundwork (such as this study hopes to contribute) in understanding the existing national policies and advocated practices, which have a mandatory character in European countries. Any experimental features and further advances in general school reform can be much better assessed on the basis of systematic information on the prevalent general patterns.

Procedures

The purpose of the study thus delineated explains the procedures I chose in carrying it out. First, my general knowledge of European school reforms, acquired through personal background and my earlier research in this field* was supplemented by my general orientation on curriculum questions from representative literature in the U.S. The central phases of work were two research tours in the three European countries during two successive summers. The first one was exploratory, to gain an overview of the developments, to outline the general task, and above all to find out what source materials would be available. The return tour, after extensive scrutiny of the documents obtained, served to fill gaps in data, to seek answers to specific questions, to clarify "hunches," and to refine earlier impressions. In particular, the follow-up was useful in letting me observe the nature and degree of progress made.*

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*Undertaken, e.g., for my dissertation, West German School Reform in Social-Political Context, Columbia University Dissertation, 1964.

In France and Italy I visited the national ministries of education; in Germany the ministries of the four _Länder_ mentioned above (the authority in Berlin is called "Senator for Education"), and in addition the Office of the Permanent Conference of the Ministers of Education in Bonn, as there is no federal ministry of education. Furthermore, I interviewed numerous professors of education at universities and research centers, also school administrators and teachers. I visited a number of schools, had many informal talks with anybody interested in education, and scanned collections of current periodicals (many not available in the U.S.) for relevant articles. Interesting reports were received at the occasion of my visit to the Office of Cultural Cooperation of the Council of Europe in Strasbourg.

The personal contacts provided invaluable and reconfirmed the necessity of on-the-spot investigations and person-to-person talks for research in comparative education. The contacts with officials also made it possible for me to obtain internal reports and other unpublished materials of significance for the study. In their intellectual effects, these dialogues provided the proper perspectives for, and interpretations of, the goals and dispositions of the ministerial documents. Moreover, the meaning of terms and concepts, at times misleading or veiled by official "_pedagoguese_," could be clarified. (For example, how close in meaning is the French "_methode actif_" to the Italian "_metodo induttivo?_" Both terms are central elements in the guidelines for teaching method.)

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*In West Germany, for example, during the interim months, three new comprehensive programs had been issued for certain school types in two of the _Länder_ to conform with a general pattern that the eleven _Länder_ ministers of education had agreed on in the Summer of 1965.

Awareness of precise definitions and connotations is particularly important in a cross-cultural comparative study in which the common denominators of terms and concepts play a great role. In this case, the often cumbersome documentary idioms of the three different languages had to be translated into the "neutral" fourth (English). For this essential process of evaluating and juxtaposing, throughout the study of the extensive source materials, my own judgment was greatly aided and refined by the discussions with the experts in the ministries and the academic circles abroad.

One particular simplification in terminology, used in this report, is the result of my decision to achieve greater readability of the text and particularly of the charts: it is the use of "academic," "semi-academic," and "non-academic" as categories to denote the three basic school types in these countries. None of the three terms is used in any of the countries. I adopted the American "neutral" terminology, with ample explanations of which types of school are included in these categories.

The report is visually supported by a series of fourteen charts that demonstrate the distribution of school hours for the various subjects taught in the middle grades. It is the only quantitative feature (but it was not included as a concession to those who consider figures and statistics a sine-qua-non of any respectable research). The design of the charts is original and may, I hope, serve as a model for similar curriculum research studies.*

The amount of school time allocated for each subject has, in the European "fixed" curriculum, a functional importance that is fairly similar to that of "credits" attached to courses in American schools (a system unknown in Europe). The charts make visible not only the changes between the past and the current curricula but also such other things as the role of foreign language study or sciences in the schools, the proportion of time left for "non-academic subjects" in the three countries, the total hours per school week (so different for France and Germany, for example). Other charts show the sums and the percentages (of the total time) of the hours allocated to major groups of subjects, e.g., natural sciences, social sciences.

The completion of this report nearly coincides with the publication of the second major international project of testing the school achievements of students in twelve countries (The International Study of Achievement in Mathematics) sponsored by the UNESCO Institute for Education in Hamburg. The general interest in the effects of school education is assuming world-wide dimensions. May the information offered in this report contribute in small measure to an explanation of some of the international differences in the outcomes of public school education.

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*The raw figures for the charts were culled from the official schedules, and the percentages were calculated by an assistant.

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I am indebted to a great number of persons for the aid and cooperation I received in completing this study; these include many teachers and school principals in France, West Germany, and Italy.

Among the ministerial officials I owe thanks especially to Professor Camillo Tamborlini, Director of the *Centro Didattico per la Scuola Media*, and his collaborators, Professors Laura Vella and Gemma Russo; also to Dr. Vittorio La Morgia, Director of the *Ufficio Studi, Programmazione e Metodi*, all of the *Ministero della Pubblica Instruzione* in Rome. At the *Institut Pedagogique National* of the *Ministere de l'Education Nationale* in Paris, it was particularly Mr. L. Géronimi and the late Professor Roger Gal to whom I am indebted. Mr. Raymond Poignant of the International Institute of Educational Planning in Paris has shared with me some of his extensive knowledge of European school developments.

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In completing the evaluation of the source materials (in three languages) I was ably assisted by Mrs. Elizabeth Wilcox and by Miss Karin Lanvermeyer who also deserves major credit for her competent and patient work in executing the charts. I wish to thank Brooklyn College for support in obtaining the research grant from the U.S. Office of Education, and for some released time for work on this project.

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I. THE MIDDLE LEVEL AS FOCUS OF THE RECENT REFORMS

"Middle level" is used in this report to denote the school phase following the four or five years of primary school and preceding the stage of advanced academic education or of vocational training. It would correspond to the American junior high school lowered by one grade level. (A similar 4-year "intermediate school" beginning with grade 5, in replacement of the junior high, has been introduced on an experimental basis in the New York City school system in 1965.) By international convention and in official publications, e.g., of UNESCO, the school level following primary education (without precise fixation of years) is called "lower secondary stage" (or ". . . school" if organized in a separate institution).

The designation "middle" for this school level is used in Italy in the name of "*scuola media*," a school that includes the 6th, 7th and 8th grades. The school type formerly existing parallel to the *scuola media*, until its recent official "merger" with the latter, was called *scuola d'avviamento*, (literally "getting-ahead" school). In Germany, several terms are used: at the *Volkschule* (elementary school) the 5th through 8th or 9th grades are called "*Oberstufe*" (upper stage), or "*Hauptschule*" (main school) in the case of the recently established centralized schools with fully developed programs which receive elementary pupils from small (mostly rural) elementary schools. At the Gymnasium and the Realschule, the 5th through 7th grades are called "Unterstufe" (lower stage), since they represent the first three years at these schools.

France, too, has several designations for this school level (here 5th through 9th year)· since it represents the first phase of secondary education it is called "Premier (1st) Cycle"; according to the latest directives, its four years are divided into "cycle d'observation" (6th and 7th year) and "cycle d'orientation" (8th and 9th year). Before the recent reforms (1959-64) there were numerous terms denoting the various types of school course available (following the 5th grade): "classes fin d'etudes," "cours complementaire," "classes nouvelles," besides the corresponding collège and lycée classes. All these terms have been abolished with the unification of the middle level in France.

The variety of terms for the "middle level" is an indication, if not a symbol, for the uncertain nature as well as the potential significance of these school years. The course of primary education, in comparison, does not arouse as much argumentation nor plans for revision (notwithstanding the disputes over reading instruction and the "new math"). The first 4 or 5 years of school everywhere are devoted to the three R's and rudiments of knowledge about the natural and social environment. Rarely is the beginning of a foreign language included at this stage.

And while there are some differences, from country to country and often between rural and urban areas, in the program and practices of teaching, the functions of the primary years are designed in response to basic needs of all children. It has, therefore, become generally accepted practice in Europe (since the 1920's and '30's) to maintain common primary schools.

For the secondary stage of schooling in Europe, the 19th century practice of separate provisions has continued in all but the communist countries (where the common school, as in the U.S., is the typical pattern). It was and remains a question of significance after how many years of school the division is to occur. It is 4 years in Germany (with some exceptions of 5 or 6); it is 5 years in France, Italy, and Great Britain; it is 6 years in the Low Countries. Another question is what type of program should be offered at the early secondary stage, when and where in addition to the classical academic schools "modern" types of academic schools emerged. The classical type schools everywhere plunge into Latin immediately with an intensity that makes any later transition of pupils to or from these schools extremely difficult.

The greatest problem of all is that of deciding which children should go to what type of school (the upper elementary school, the semi-academic school, or the modern or classical high school). In recent decades the awareness of the inadequacy and irreversibility of these decisions has led to ubiquitous attempts to revise the procedures of selection and to revise the curriculum in these crucial school years. The school reform plans in France, Italy and Germany (as in other European countries) have focused the greatest attention on this phase of the education systems, which is undergoing innovations that are more imaginative and far-reaching than any other features of the school systems.

The heightened interest in the function of the post-primary years of schooling has arisen not merely from pedagogical insight and the humanitarian impulse to upgrade the instruction of hitherto inadequately educated segments of the population. These motives had been articulated for many years by reform-minded educators in the three countries. And there was no lack of reform designs nor of experimentation with new patterns.[1] What finally moved the ministries of education and the legislatures to decide on significant revisions in the school programs for these middle grades was primarily a national socio-economic concern. The scientific and industrial developments today call for growing numbers of highly educated people, and the customary small proportion of university graduates in European countries proves quite inadequate to meet the needs. OECD projections[2] made evident that the manpower situation will grow even worse in the future.

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[1] Well-known recent examples are the French "classes nouvelles" of the 1940's and the "classes pilotes" of the 1950's, as well as the Decree of 6 January 1959 issued by President de Gaulle, which called for an extension of compulsory schooling and other changes. In Germany, several *Länder* (states) have experimented with a "*differentiated middle level*" since the early 1950's; the "German Committee on Education" published a series of reform proposals between 1954 and 1963, foremost the comprehensive "*Rahmenplan*" in 1959. In Italy, experiments with reforms in the *scuola media* have been conducted since the early 1950's; *reports on these* are, however, not available in English. For details of the French and the German post-war reforms, American readers are referred to George Male, *Education in France* (1963), Ursula Kirkpatrick, "The Rahmenplan for West-German School Reform," *Comparative Education Review*, IV/1, June, 1960 and Ursula K. *Springer* (same author), "West Germany Turns to *Bildungspolitik* in Educational Planning," *Comparative Education Review*, V/1, June, 1965.

An enormous teacher shortage in West Germany since the 1940's led, in the early 1960's, to an all-*Länder* survey and forecast of staff needs.[3] Several statistical studies[4] of school enrollment patterns of the *Länder*, of future demands for teachers, etc.--which demonstrated ever-growing gaps between supply and demand--were so alarming as to call for drastic measures. The intensity of public indignation over the conditions of the schools is reflected in the common use of terms such as "school chaos," "educational catastrophe," "the misery of the German *Gymnasium*," etc. in the public media, in book titles, in conversations. In France and Italy there was and is less of a teacher shortage and there is less overt public discontent with the conditions of the school systems.

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[2] Organization of Economic Cooperation and Development, Office for Scientific and Technical Personnel, *Targets for Education in Europe*, Paris, 1962, and several more studies published by this organization.

[3] Germany, Kultusminister-Konferenz, "Bedarfsfeststellung 1961-1970," Bonn, 1963.

[4] Practically all of these were inspired by the leading economist of education, Friedrich Edding, now a director at the Max-Planck Institute of Educational Research in Berlin.

But both countries are concerned about the development of educated manpower and have thoroughly assessed their resources and future needs in this respect as part of their comprehensive economic development plans.

In France, these projections are contained in the regular four-year development plans which were initiated after World War II. The most elaborate assessment of the existing productivity of the school system and forecasts of future trends and needs are found in the "Fourth Plan," the "Quatrième Plan de Développement Economique et Social (1962-65)," as Rapport Général de la Commission de l'Equipement Scolaire, Universitaire et Sportif.[5] In Italy, a 10-year plan for the development of manpower was issued in 1955: "Schema di sviluppo dell'occupazione e del reddito nel decennio dal 1955 al 1964." This plan led to a 10-year school development plan, "Piano decennale di sviluppo della scuola," inspired by President Fanfani in 1958; the latter, however, was not accorded sufficient support and financing by the parliament.[6]

These national plans, as also the German "Bedarfsfeststellung" (= "Assessment of Needs"), clearly demonstrated that a broad-scale solution to the problems could only be sought in an increase of students in the academic schools as prospects for future university and teacher training graduates. These additional students must be found among the "talent reserves," the able children of lower-class families who normally would not send their children to academic schools. The motives of lower class parents for not doing so were economic (the longer postponed earning capacity of their children) as well as social (they feared their children would not adjust to the "upper class" character of the school). In addition, their children even if generally able would have difficulty in coping with the exacting programs of learning. Among the beginners of the academic courses customarily 10 to 15 per cent were dropping out. As demonstrated by surveys, most of the children who failed toppled over the linguistic hurdles. Latin and also modern foreign language--as taught in the *lycée*, *Gymnasium*, etc.--proved especially hard for children of verbally less cultured families. These children were usually not helped along but "screened out" for their "own benefit." (The academic schools had always been openly selective and geared to an "intellectual elite.") Often such pupils were otherwise able, or they would not have been recommended by their primary teachers.

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[5] Published by the Commissariat Général du Plan d' Equipement et de la Productivité, Paris, Imprimerie Nationale, 1961. The school developments are mainly discussed in Chapters II, III, and IV.

[6] For a discussion of this plan see Lamberto Borghi and Anthony Scarangello, "Italy's Ten-Year Education Plan," Comparative Education Review, IV/1, June, 1960.

In order to bring about the necessary changes in school enrollment patterns, comprehensive reform plans were adopted in the three countries. In France, a decree issued by President de Gaulle on 6 January, 1959, extended compulsory schooling by

2 years (in gradual steps) and established new procedures of access to secondary education. A sequel decree of 3 August, 1963, instituted important innovations on the middle level: the abolition of all vocational training during those years and enhanced opportunities for admission to academic schooling by means of a unified curriculum program and by careful pupil observation. This unification is carried even further: a common school (with slightly different sections) on this level has been promulgated for gradual implementation, the so-called "*Collège d'Enseignement Secondaire*."[7] In Italy, a reduced version of the Fanfani-Plan (of 1958) was passed in 1962, the 3-year plan "Provvedimenti per lo sviluppo della scuola nel triennio 1962-1965" (= "Provisions for School Development . . ."). One effect of this parliamentary provision was an elaborate 380-page report (including detailed statistics), presented by Minister Gui in 1963, on the state of the education system.[8] The other major effect was the national law, passed on 31 December, 1962, on the institution and implementation of the "*scuola media statale*," the unified middle school. The law includes, as in France, the abolition of vocational

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[7] These decrees, as all other documents on the reforms on the lower secondary school level, are formed in *Le Premier Cycle*, publ. Ministère de l'Education Nationale, Paris: S.E.V.P.E.N., 1964.

[8] *Relazione sullo stato della pubblica istruzione in Italia*, publ. by Ministero della Pubblica Istruzione, Roma, n.d. (1964).

training on this level and the introduction of a modernized curriculum that should provide greater facilities for transition to advanced secondary education.

In Germany, the afore-mentioned "Bedarfsfeststellung" did not lead to a comprehensive national plan, but it did alert the Länder governments to the need of improving their school facilities and revising their school programs. For the sake of coordination, the heads of government established an agreement on basic common needs (published in October, 1964) concerning a lengthening of compulsory schooling, the upgrading of non-academic school education, etc. In December, 1964, the education ministers followed up with an agreement on "Emergency Measures in the Field of Education"[9] for general implementation in the Länder.

The objectives of the reform decrees, plans, and agreements, which were subsequently translated into directives and guidelines by ministries of education, are remarkably similar in the three countries. In broad outlines, these measures were recommended as essential:

1. To identify the abilities and inclinations of the students;

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[9] "Vordringlich erforderliche Massnahmen auf dem Gebiet des Bildungswesens." Both agreements are published in the collection of documents, Sammlung der Beschlüsse der Ständigen Kultusministerkonferenz, ed. Paul Seipp and A. Fuetterer, Neuwied and Berlin: Hermann Luchterhand, 1963 and continued.

2. To win the able students and especially their parents for the decision of longer school education in academic programs;
3. To modify the academic school programs, especially at the early secondary level, toward a more modern, realistic character, and to give sufficient assistance to students whose families cannot furnish the educational background and help;
4. To arrange for easier transfer possibilities at later stages than the normal starting point of academic and semi-academic schools in order to give chances to "late bloomers" and "late deciders";
5. To upgrade the non-academic programs for children of average abilities in order to provide sufficient background for future technical and other semi-academic training;
6. To establish many more secondary schools easily accessible to children from rural and working-class areas (the sparsity of such schools was proven to be a significant factor in enrollment practices).

These reforms were presented and defended not merely as matters of national economic interest, but as means toward a "democratization" of the educational systems, which in fact they are. It is an interesting reflection on the political situations in France, Germany and Italy that under the motto of "democratization" alone the same or similar antecedent reform proposals had not found enough official support. The road of school reform in the three countries had been paved with disappointments. Only when factual surveys and statistical projections demonstrated the present and future needs for more trained manpower, were the legislators and administrators persuaded to accept the costly and partly radical steps toward a more democratic distribution of educational opportunities and the general upgrading of compulsory schooling. The reform-minded politicians, i.e., mostly those of social-democratic leanings, and the "progressive" educators finally had their day.

The spirit of "democratization" is an overt feature in the ministerial directives that were issued to implement the reforms.[10] The term itself is used in references and exhortations dispersed throughout the official directives, more so in France and especially in Italy than in Germany, where nowadays official language tends to be kept free of terms that may hint at political ideology.

The major focus of the broad reform policies, and correspondingly of the ministerial directives for implementation centers on the middle level, i.e., those years that are decisive for the subsequent school career of a child. The planned innovations have a potentially far-reaching effect, not only for a more democratic distribution of educational opportunities, but also for an eventual modernization of the upper levels of academic education. The socio-political impulse has mobilized new thoughts on curriculum, on student observation and guidance, on improved teaching methods, and on better cooperation with the parents. While all these facets were observed in the research for this project, the emphasis has been placed on the new developments in the curriculum itself.

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[10] For details on these see Chapters IV and V.

II. STRUCTURE AND CHARACTERISTICS OF THE SCHOOL SYSTEMS

Basic Structure

The public education systems in Europe were designed in a pattern that provided schools along parallel or overlapping tracks rather than uniting all children (of equal age groups) under one school roof. The historical stratification of European society explains the system of different provisions for the children of the "educated" classes and the children of the masses. Originally, the children were separated from the first grade on, but since the end of the First World War most European nations introduced common school attendance through the first 4 or 5 elementary grades.[11] From that level on, the paths divided: a small minority of privileged children entered the first stage of their long academic training. The mass of children completed their 7 or 8 years of compulsory education in general or vocational elementary schools. (In Italy, the majority used to terminate their schooling, in fact, after the "quinta elementare," the 5th grade, even though the law prescribed school attendance till age 14 since 1923. Even nowadays, the school attendance laws are not fully enforced, especially not in the south.[12] This traditional structure of parallel school types, subsequent to the common elementary years, has been maintained in Germany, while it has been modified in France and Italy by the recent reforms. The implementation of the reforms, however, is barely beginning. The following description includes the traditional system and, wherever applicable, the planned changes.

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[11] In Germany this innovation was incorporated in the Weimar Constitution of 1919, reflecting the progressive ideology of the Social Democratic Party then in power.

In the three countries, primary (elementary) school begins at age 6; Germany and Italy provide no public kindergarten classes, France offers "école maternelle" classes for ages 3-6 in many places, but less than one half of all children attend those classes. The names of the elementary school are: in Italy "scuola elementare," in France "école primaire," in Germany "Volksschule" which in turn is divided into "Grundschule" (first 4 years) and "Hauptschule" (a new term for the upper 4 or 5 years). This school combines all children for primary education through 5 years in France and Italy, through 4 years in Germany (except for the City of Berlin where, after World War II, it was extended to 6 years).

In Italy, most of the elementary schools ended with grade 5, except for some that continued for 2 or 3 years of terminal elementary education. But the majority of non-academic pupils (of those who did not quit school at this point) transferred to vocational post-elementary 3-year schools called "scuola d'avviamento" (continuation school). In France and in Germany the elementary schools normally continued up to grade 8, offering a terminal elementary education (after which the children began their apprenticeships). France, however, had at this level also a number of trade schools that combined general and vocational training (similar to the Italian scuola d'avviamento). These were called "centres d'apprentissage" from the 1930's to 1961, when they were absorbed as "technical sections" in the "collèges d'enseignement général." Germany never included vocational training during the first 8 years of school, but it has provided--since 1919[13]--compulsory part-time vocational education (8 to 12 hours weekly along with apprenticeship or practical work) up to age 18 for all adolescents not attending a full-time school. (This school is called "Berufsschule.") Compulsory full-time education, in all three countries, ended after 8 years of school, not at a certain pupil age (as in the U.S.). In all three countries there were and still are a small number of free full-time trade and commercial schools (one or two-year courses), usually run by the communities. There are also many private commercial (and similar) schools.

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[12] For statistical details on European school enrollment trends and quantitative comparisons of provisions for general and professional education, see the excellent study by Raymond Poignant, L'Enseignement dans les Pays du Marché Commun, Paris: Institut Pédagogique National, 1965.

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[13] This provision, too, dates back to the Weimar Constitution and appears again in the present one.

The structural changes of the French and Italian reforms have now abolished all vocational training throughout the period of compulsory education, and have introduced--on the post-primary level--a common school type combining all students: academic, semi-academic, and non-academic alike. What used to be the terminal elementary type of education is now becoming a secondary type of general education with opportunities of transfer to more academic courses and of continued education, after graduation, at schools of higher levels.

Thus in Italy in 1963-64 the _scuola d'avviamento_ has been merged with the (academic) _scuola media_ into a common "_scuola media unificata_." In France, first, in 1961, the two types of non-academic post-primary schools (_cours complémentaires_, _centres d'apprentissage_) and also the semi-academic schools, imparting "short" general education (through the 9th or 10th grade, called "_enseignement général court_") were all merged into a new common school: the "_collège d'enseignement général_." Later, in 1964, the reform was extended to include also the lower 4 grades of the academic schools (the _lycées_). This entirely unified lower secondary school has been termed "_collège d'enseignement secondaire_." But different from the Italian equivalent, it maintains different branches (usually 4 or 5) that correspond to the old-type separate schools at this level. Another difference from the Italian reform concerns the process of implementation: rather than completing the change all at one time, the transition in France is gradual. There exist as yet very few of the entirely unified _collèges_ in the big cities, where the prestigious *lycées*, the strongholds of traditionalism, are permitted to continue receiving pupils directly from the 5th grade of elementary schools. But the first step, that of introducing the common *collège d'enseignement general* (the school type without the academic classes) has been implemented everywhere in France.

The length of compulsory schooling has been extended from 8 to 9 years in Germany and France. There are plans to extend it one more year some time in the future. Italy has not changed the traditional 8 years of compulsory education.

For the academic type of education the old structure has been largely preserved, except that in Italy and France the first phase of the academic school has been opened also to non-academically geared pupils. Traditionally, the children of the privileged classes--after the 5th grade in France and Italy, after the 4th grade in Germany--transfer to academic schools; in Italy first for three years to the "*scuola media*," then two years to a "*ginnasio superiore*," from there to the "*liceo*" for final 3 years. *Ginnasio* and *liceo* are usually combined in one school. In France and Germany there are no different stages: the children enter the "*lycée*" (in France) at age 11, and the "*Gymnasium*" (in Germany) at age 10; about half of them remain for the full course of 7 years (in France) or 9 years (in Germany). The other half drops out earlier, usually after the completion of ten years of (total) schooling at about age 16. This corresponds to the completion of the Italian *ginnasio*, a point at which also in Italy many students break off their schooling. A wide variety of training programs in business and semi-professional fields are available to those who leave the academic secondary schools at this stage. Those who remain and pass the grueling exams for graduation--called "*Baccalauréat*" in France, "*Maturità*" in Italy, and "*Abitur*" in Germany--are entitled to enter any university of their choice for any course of study. (There are some restrictions in choice of study field for graduates of technical, economic, or other special forms of academic secondary schools.)

In Germany, a third school type has developed parallel to the *Gymnasium* and the upper part of the elementary school ("*Volkschule*"). This school type is the "*Realschule*," formerly called *Mittelschule*, which receives pupils after 4 or 6 elementary school years and imparts 6 or 4 years of general semi-academic education designed for "practical-minded" young people who aim at medium-level careers in business, industries, hospitals, etc. Although the *Realschule* originated in the 1850's, it never grew to any significance before World War II, partly because many of the older *Realschulen* were stocked up with 3 grades and thereby absorbed in the *Gymnasium* category,[14] and partly because this school type lacked prestige and ideological backing. But since the 1950's the *Realschule*--which roughly compares to the (complete) *collège d'enseignement*

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[14] As "*Oberrealschule*" or "*Real-gymnasium*" in response to demands, *during the late* 19th century, for academic schools with modern rather than classical curricula.

général in France--attracts a fast-growing percentage of children in Germany.

Traditional Characteristics

The traditional characteristics of the different school types play a vital role in the current (and past) struggles over school reform in the three countries. Structural changes are only a part of any educational revision; they must be complemented by internal changes in program and practices to fulfill the spirit of the desired reform. But these internal changes involving character and concepts of long-established school types are hard and slow to accomplish. It is therefore correct to describe the traditional characteristics as still existing, in order to place the new aspirations in proper prospective.

The characteristics are rooted in religious, philosophical, socio-economic, political, and pedagogical traditions, which are too complex to discuss in this context. A brief description of the overt characteristics (and their effects) must suffice. For our purposes it is best to distinguish between 1) the officially assigned objectives and characteristics; 2) the actual characteristics in their sociological and practical effects; 3) the problems related to the characteristics.

1. The three countries, as traditionally all of Europe, have maintained different types of schools because this system is believed to serve best the different needs of social strata. Historically, the sharp division of classes with different

life styles made it unthinkable to have all children receive the same kind of schooling. Nowadays, it is still largely the pattern of occupational categories that is used, e.g. in Germany, as basis for the different scopes of the schools, although the division of children in the different school types is officially based on their ability, not social class.

Since the establishment of public schools, the mass of children were assumed to be incapable of advanced learning and to be destined for rural and laboring life careers. Their schools therefore were designed to make them into God-fearing, hard-working, law-abiding citizens, equipped with basic knowledge in reading, writing, armithmetic, religion, and a bit of history and geography. Too much knowledge was considered damaging to their contentment and therefore dangerous.[15] Religion was highly stressed. The teachers of these schools usually came from the lower and lower middle classes, had limited, if any, secondary schooling and had usually finished their training for teaching by the age of 18. During the past half-century, both curriculum and teacher-training were somewhat strengthened, and the official directives have mitigated the overt assumptions of "dead-alley" life chances and limited needs for knowledge.[16] Instead, new emphases were placed on adequate preparation for life in "practical occupations" and household (for girls), thus slightly shifting the basis of reference from social class characteristics and needs to occupational goals and needs, which in turn depend--presumably--on personal abilities and inclinations.[17]

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[15] This viewpoint on the part of the governments in the 19th century is clearly documented in official decrees of that era, as for example in the German school regulations by Minister Stiehl for Prussia, issued after the revolutionary events of 1848.

The *academic secondary schools* of the three countries are direct heirs of the Latin Schools of past centuries. The spirit of learned humanism, until this day, is the essential root of objectives and curricula of these schools as evident in their chief emphasis on linguistic and literary studies. Knowledge of the ancient languages and the literature of the great masters, in past centuries the preserve of merely the small number of scholars (not the upper classes of European society in general), became the mark of distinction of the "educated" or "cultured" strata of society after the intellectual and social changes of the 18th century. When the monarchical governments, in the early 19th century, established schools for the sons of the privileged classes, the natural sciences and other studies of the "realities" of the world were still too undeveloped to compete for positions of importance in the learned schools. Some room, though, was made for mathematics and history. Since the late 19th century in Germany, and the early 20th century in France and Italy, there were instituted new versions of the academic schools that stressed the sciences and mathematics in the upper grades. Yet the preponderance of time and effort was--and still largely is--devoted to language and literature studies in all the academic schools. As an illustration, the proportion of weekly school hours devoted to literary and language studies throughout the academic school years may be examined: in the classical secondary schools in Germany these studies absorb almost 50 per cent of all school time, in France and Italy, a little more than 50 per cent. Even in the "modern" and the scientific type of academic schools the proportion is about 30 per cent for France and Germany, and nearly 50 per cent in Italy.[18]

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[16] Yet as late as 1947, the directives in effect till 1962 for the Italian *scuola d'avviamento* for mechanical training stated that the *cultural learnings* (general education) in this school is kept "at a level defined by the modest needs of the laborer." Italy, "Scuola di Avviamento Industriale, Ovarie Programmi" (October 1959), p. 3.

[17] For example, German directives for instruction in the *Volkschule* always stress the importance of teaching through *concrete* experiences: manipulation of objects, audio-visual aids, trips into the environment, etc., and all kinds of "*Anschauung*," because these features are thought to be the learning means most natural to the "practical minds." In addition, of course, drill is stressed, while abstract thought processes are minimized.

Several factors contributed to the tenacious survival of the humanistic character of the academic schools. One was the time of their formal establishment on a national basis during the era of neo-humanism and idealism, when, e.g., in Germany eminent intellectuals provided philosophic rationales for the formative value of classical studies to the mental, moral and esthetic development of the person. Another factor was the growing nationalism, which in France and particularly in Italy until this day considers the study of Latin cultural heritage as well as the national literary classics a source of patriotic pride and strength. German nationalism (in conjunction with the "Kulturphilosophie" of the early 20th century) modified the emphasis on the classics and wholly or partially replaced it by modern languages and stress on German linguistics and literature.

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[18] Calculations from figures presented in Raymond Poignant, *L'Enseignement dans les Pays du Marché Commun*, *op. cit.*, Annex no. XI, pp. 318-19.

An additional explanation for the persistence of the emphasis on literary studies is the fact that the administrators and educators responsible for the organization and progress of the school systems (foremost the ministerial officials) in the three countries have all been products (and defenders) of classical and literary studies; rarely did a scientist or mathematician hold a responsible position at a ministry of education. Last but not least, the Church interests in Italy and in the German Länder with strong Catholic influence have always been in support of classical languages as major school subjects.

To conclude: the academic schools were originally designed to form "la persona colta," "den gebildeten Menschen" by studies of the languages and literary classics of the cultural past. Present attempts to revise this tradition are underway, as illustrated by this statement found in a

French ministerial directive of 1960 (dealing with the guidance of pupils) . . . "it would be truly unacceptable, in our epoch, to reserve only to the classical humanities the privilege of high culture."[19] But the statement implies that this conception is still widely held.

2. The major practical and sociological effects of the official functions assigned to the academic schools have come under heavy criticism in recent years. They can be summarized as follows: The students are overloaded by heavy demands on memory work and linguistic studies. The orientation of study programs is concentrated on the past. The natural and social sciences, while assuming ever-growing importance in modern life, are sorely underrepresented in these schools.

The students' minds are mainly trained in book-learning which emphasizes established authority rather than intellectual curiosity, and development of rational approaches to problems of reality.

These schools with their esoteric programs and their stress on linguistic skills discriminate against children from lower classes who lack the background conducive to language studies. Moreover, they tend to reinforce class differences by perpetuating a distinct superiority of the educated elite with its prestige and snob appeal.

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[19] France, Ministère de l'Education Nationale, Le Premier Cycle, op. cit., p. 17.

3. The problems resulting from the characteristics of the schools are the basis for the present efforts in three countries to modernize the education system. One problem is the situation--incongruent to modern society--that the masses of population obtain a few years of "terminal" schooling in the rudiments of applicable skills and are condemned, with a few exceptions, never to rise to positions of learning and prestige. The children of the small privileged strata, on the other hand, are given an education that differs not only in quantity and quality, but that supposedly "forms" them in the ideal image of a "cultured person." The selection for such conferment of privilege should in theory follow the ability and inclination of the children; in reality, however, it is made by the parents' wishes, as has been amply demonstrated by statistics in the three countries.

The early division of the children (at age 10 or 11) and the differences in curricula and teaching styles have made it nearly impossible to change decisions on school careers, thus fixing a child's life chances at a very young age with little hope for revision.

A major problem on the national level today--as mentioned in the preceding chapter--is the small number of university graduates in mathematics and the sciences, a number totally insufficient for the modern economic and industrial structure of the nations. In Germany, there is great dearth of academically trained personnel in nearly all fields, especially teaching and the sciences. The only way to increase the number of graduates is to expand the number of secondary school students. There are reserves of able children, especially reserves of girls, in families of the rural and working classes. To such families, however, the esoteric character and non-practical curricula of the academic schools hold little appeal for their children; or these children, if transferred to these schools, cannot cope with the linguistic demands which, especially during the early grades, function as main selective criteria.

Among other problems related to the characteristics of the schools only one more should be mentioned. Neither of the school types, elementary or secondary, has been assigned the function of fostering the spirit of inquiry, creativity, and scientific method, or the democratic skills of cooperation, citizenship, etc. Official awareness of these shortcomings is made evident in the French, German and Italian detailed directives explaining the new instructional emphases of the recent reforms. The professional literature of all three countries abounds in suggestions of modernizing the style and focus of instruction.

These critical observations on the different characteristics of the school types are not meant to belittle the strong sides and past achievements of the education systems. In France, Germany, and Italy the elementary and vocational schools have produced generations of people whose basic education, well-trained skills, diligence, and sense of duty have richly contributed to the flourishing strength of their nations. The graduates of the French lycée, the Italian liceo and the German Gymnasium tend to be truly "literate" persons, well-skilled in oral and written expression, trained in the habits of work discipline, knowledgeable in the conventional canon of literary classics both of their own and the classical culture. They know European history and world geography as well as the fundamental scientific theories. Above all they are imbued with a respect for intellect, "culture," and the artful use of language.

Whether the educated elite of the three countries has ever reflected the lofty ideals of a truly humanistic spirit, or the "Bildungsideal," is another question, which may elicit a skeptical answer in view of the countries' history. Perhaps these ideals cannot be attained by the study of languages and the classics on the school level. A certain degree of disillusionment with the traditional ideals is noticeable in Germany, less so in France and Italy. Nevertheless, the satisfaction with the inherited style of academic schools is still strong enough to prevent any significant changes in academic education toward either the American or the East European patterns. Instead, other ways were chosen to accommodate the (now welcome) influx of students from wider social strata: parallel to the existing types of academic schools, additional types have been instituted where the emphases are either on scientific-technical studies or on the social sciences, including economics. This diversification, which appears not on the middle but on the upper level of academic schools, has been developed especially in France and Germany, less so in Italy.

III. NATURE AND PLANNING OF THE CURRICULUM

Nature

Description. The structure of the curriculum plays a much greater role in Europe than in the United States, where (on the high school level) a variety of courses is offered to a student so that he may design, with guidance, "his own" curriculum. In the European systems, the schools have fixed curricula for all students to follow. Yet there are two sorts of choices for the students (after the decision on secondary school type has been made): 1) which of the two or several branches within the school is the best suited to the student, and 2) whether to take one or more supplementary electives.

For each school type (and if there are different branches, for each of these) the subjects to be taught are carefully planned from the first to the last grade. The planning extends both to the content covered and to the school hours spent on the subject. As to the latter, the time is counted in weekly hours per grade (for example, the 5-year liceo classico in Italy teaches 2 weekly hours of history per year, that is 10 total hours; or the upper part of the Volkschule in Bavaria, Germany, offers 2 hours of music in grade 5 and 6, then 1 hour of music in grades 7, 8, 9; the total is 7 hours of music for the total five grades).

Most of the subjects are taken by the students throughout all the years of their school. Annual or biennial self-contained courses are not customary in European schools, except for some electives and a few subjects that are taught only to the limited extent of 1 or 2 years (e.g. philosophy in the top grade of a French *lycée*). Evidently, this system places greater value on continuous contact with the school subjects throughout the students' different age levels than on a concentrated treatment of subjects for one or two years (as in the U.S.). One of the consequences is, in the European system, a greater amount of repetition of learnings, but at levels of increasing depth and difficulty, somewhat like the "spiral curriculum" proposed by Prof. Bruner of Harvard.

A weekly schedule for a student usually contains 7 to 10 (or even more) subjects, the number increasing in the higher grades where new languages or sciences are added. The combined subject-hours per week average from 28 to 33 with no study periods but plenty of homework (often 2 to 3, even 4 hours a day). School time is distributed over 6 days a week, with the exception of France with its traditional "free Thursday," which, however, in a number of *lycées* is not kept because of shift schedules due to building shortages.

Explanation. Europeans maintain the prescribed programs of study in their schools because of their belief in the formative value of a structured integration of subjects. The different patterns of combinations, especially for the academic schools, have a central core and a guiding idea that are considered essential for achieving true education. (This is comparable, e.g., to the liberal arts ideal of many American colleges, while the American high school type of curriculum is looked at by Europe as a "smorgasbord" of learnings.)

For the classical schools the ancient languages represent the core, for the modern lycées and modern Gymnasien,[20] the core is modern languages or mathematics and science. The original guiding ideal was the image of "humanistic man," to which were later added the inspirational values from (theoretical) studies of science and from the great literature of modern times. These prototypes were not conceived as one-sided but roundly educating in the sense of the French "culture générale" or the German "Allgemeinbildung." Therefore the supplementary subjects are required (though in less quantity), and they are--ideally--designed and taught with integrative references to the core subject.

The various school subjects are ascribed different degrees of formative value. Still following humanistic tradition, the subjects dealing with language and written thought (religion/philosophy, mother tongue/literature, all foreign languages) are believed to have greater educational value than, for example, science or geography, because the latter supposedly teach mainly facts. Mathematics is held in great esteem as training logical thought. Traditionally history was ranked as a "minor" subject, music and art even lower, but in recent years, the German systems have given greater importance to these three. The rank order of subjects is evident not only in the number of class hours but also in the amount of homework assigned and the required number of compositions (or tests) written in class per year. Failure in one major subject, if coupled with other low grades, usually requires a repetition of the entire school year; for minor subjects, the breaking-point is two failures (with other low grades).

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[20] For foreign language words, the foreign form of plurals is consistently applied. For "Gymnasium" it is "Gymnasien."

To the less-academic or non-academic schools, the above-mentioned ideals do not apply. Traditionally their spiritual core was religion (and public Volksschulen in some Catholic regions of Germany continue to prescribe 4 hours of religion each week). But the role of religion is diminishing today. (In France, religion is altogether abolished as a school subject; instead, the French schools for the masses maintain the free Thursday for religious instruction to be given by the churches.) The curriculum of these schools is designed to prepare the students for practical life and work, but the "realistic" subjects and the "non-abstract" ways in which the teaching should be conducted are not considered as having "formative" value in the sense of academic tradition. An instructional core, an intellectual ideal is missing; and this fact is reflected in the present curriculum reforms, which for the non-academic schools are based on criteria more pragmatic and psychological than are used in the designs for the academic schools.

There are some exceptions to this situation. In Germany, the primary school years (after the first two grades) center on "Heimatkunde" (social studies of the local and regional environment) as the integrative core subject,[21] in the tradition of Pestalozzian principles, which are still a major influential force in German elementary education. Moreover, in France and Germany, where compulsory schooling is extended to 9 years (with the future prospect of 10), attempts are now made to introduce the central core of "preparation for the modern world of work" in the 8th and 9th grade. But there exist as yet no experiences to guide the planners, nor are there instructors trained to teach these features (the schools are staffed by elementary school teachers), and there is no agreement on the desirable proportion of "general" vs. "utilitarian" education in these grades.

One major criterion for the programing of subject content and the methods of teaching is the psychological development of the children. This criterion plays a much greater role in the non-academic than in the academic schools (whose teachers in France and Italy are not at all, and in Germany only scantily, trained in educational psychology).

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[21] This is reiterated, e.g., in the directives concerning instructional content in the ministerial guidelines for the Bavarian Volksschule of July, 1966. ("Amtsblatt . . ." of July 5, 1966, p. 192.

Implications. Several implications for the curriculum on the middle level can be gathered from this survey of general characteristics:

Traditionally, there have always been two parallel patterns of curriculum (or three where semi-academic school-types exist) for the grade levels 6 (or 5 in Germany) to 8 (and now 9 in France and Germany) while on the grade levels below that (the primary grades) the school systems have only one curriculum for the one common school, and on the grade levels beyond the 8th or 9th year (i.e. beyond the terminal points of non-academic schools) a clearly defined academic curriculum exists that shows only differences in emphasis (classics, modern languages, science).

These two (or three) main patterns of curriculum on the middle level have always been significantly different, analogous to the different nature and purposes of the school types. Contrary to the lower and upper levels, on the middle level, a central core, a major emphasis, has not been developed. In the non-academic schools, these years are leading to terminal education; in the academic schools, they are serving as preparation for the subsequent clearly articulated courses of study.

For purposes of reforms or innovations, the "unfixed" character of the middle grades is a boon and a bane at the same time: a boon since fewer ideological traditions have to be overcome; a bane since, in want of guiding ideals, the curriculum planners tend to adopt the guiding ideals of the academic schools now also for the designs of the common programs of the middle level.

The attempts to mitigate the pronounced curriculum differences on the middle grades level, or even to unify the curriculum for all children in these grades, face the difficulty of obtaining agreement (and cooperation) between teachers and administrators of two distinctly different outlooks and training.

Planning

Procedures. Different from the American practices, the questions of the curriculum are not left to the discretion of the teachers or the schools, but are centrally determined by the ministries of education, i.e., on the national level in France and Italy, on the Länder level in Federal Germany.

Curriculum matters are taken very seriously in all three countries, and it is not unusual for controversial issues in this realm to be discussed and decided by the national (or Länder) parliaments. (There are no school boards.) Sometimes public and political involvement in curriculum changes becomes intense, especially when the latter have a socio-political impact, as in the changes of Latin instruction in the newly established unified form of the scuola media in Italy.[22]

The planning of the curricula is a task of the ministerial departments in charge of the different school types (elementary schools, middle schools, academic high schools, etc.). For the designing and the revising of the plans, committees consisting of officials, regional supervisors (inspectors), experienced principals, and teachers from pedagogical institutes are formed to do the work. Neither classroom teachers nor specialists from related fields participate in these committees, but they are consulted to varying degrees. It is not easy to gather information about the "making" of curriculum designs, since nothing is published about the procedures in any of the countries. The account here presented draws on 1) information from personal interviews with officials in the ministries; 2) introductory statements in documents dealing with curriculum design; and 3) inferences from analysis of the finished curricula.

In the Italian and French documents presenting the new curricula, there are no references to the genesis of the new directives. The latter are issued as government decrees or ordinances, in Italy by the minister of education, in France too, while some decrees originate directly from the head of state.

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[22] Two illustrations: When the Bavarian Ministry of Education, in 1961, planned to reduce from 13 to 11 the number of subjects taught during the last (13th) school year, the question of which subjects to drop was heatedly debated in Parliament and caused front-page headlines in the newspapers. In Italy, the question of the starting-point and extent of Latin instruction in the middle grades provoked bitter disputes among the party factions in the national parliament in 1962.

In the German _Länder_, the equivalent documents are termed "communications"; they are not "decrees" but "directives" or "guidelines," and are submitted not as definitive but for a try-out period (of a few years). The communications usually include a broad request for criticism that may arise during the early phases of implementation. One Bavarian document on the new curriculum for the Gymnasium (of 26 August, 1964) referred in the introduction to those who assisted in working out the plans: for each school subject there was a special committee composed of "renowned professionals," mostly experienced teachers of the pedagogical seminars, who are responsible for the training of teachers in didactics and methods of the subjects under revision. Other participants were representatives of the professional teacher associations. University scholars were consulted on all academic subjects at the final stage of the task; numerous classroom teachers were shown the draft with the request for criticism.

The curriculum committees for the different schools do not usually collaborate, yet they do consider the designs of the other school types, particularly with respect to the provisions in grades that precede or follow their own school type, in order to dovetail the designs. Serious attention is given to entrance requirements--to expectations that higher schools have for transfers or graduates from lower schools (the universities for graduates of the academic high schools, the latter for pupils from middle level and the elementary schools).

In general there is no true *integration* of the curricula of the different school levels, since the characteristics and purposes of the schools are viewed to be different. Exceptions (among the school systems here examined) are the approaches taken by Berlin and Hesse which have planned the curricula with a total view on the various school types. Also in the other systems there are some efforts of enhancing the integration at least on the middle level. This trend, in fact, is part of the present reform movement.

Forces influencing planning. What are the *forces and motives* that *influence* the planning of the curricula, especially the present ubiquitous revisions? A major impulse, obviously, comes from *structural reforms*, which in turn are determined by the national or *Länder* parliaments. In addition, policy decisions of the legislature and of the ministerial executives require adjustments in the curriculum. Occasionally there are special demands concerning the introduction or strengthening of particular subjects, such as civic education, which in Germany (in 1959) and Italy (in 1958) was an object of national governmental concern and directives to the education ministries.[23] In Federal Germany, with its system of

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[23] For details see Chapter VII.

Länder "autonomy" in cultural affairs, the chiefs of the Länder governments have made, during the last twelve years, several inter-Länder agreements concerning curriculum revisions. These agreements, which are official state contracts,[24] aim at achieving a closer coordination in three areas: the foreign language sequence in the Gymnasium; the curriculum of the last two years before the Abitur exams; and the beginning --in spring or fall--of the school year.

Organized forces that stimulate curriculum revisions, by general criticism or pressures, are the political parties, business and industry, labor, the professions, the universities and, of course, the teachers' associations. Some of these interest groups present detailed proposals of desired changes and/or publish articles and brochures intended to gain public support for their ideas. To what extend such pressures are individually effective is difficult to gauge, since the accomplished innovations are usually the product of an interplay of forces. Opposition to many reform plans, especially on the lower and upper secondary school levels, tends to be strong among the academic teachers and university professors, who fear a watering-down of standards whenever requirements and instructional content of the academic schools are subjected to revisions. In contrast to the recent American trend of renowned scholars (such as the Professors Zacharias of MIT and

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[24] Notably the one of 1955 called "Düsseldorf Agreement" and its sequel of 1964, the "Hamburg Agreement."

Bruner of Harvard) offering their proposals for the up-dating of school curricula, there seems to be no such initiative as yet in the three countries under study.

There is, however, among those responsible for curriculum design, a general "groundswell" of awareness that modernization of instructional content and practices is necessary. A comparison of designs and directives of earlier years (the 40's and 1950's) with those issued in recent years (the mid-1960's) bears witness to that fact. The changes, to be sure, are rarely drastic. But experimentation with more radical changes in instructional patterns is encouraged by the ministries of education, provided the latter's permission for the experiment has been obtained. Some of the German Länder ministries actively and financially support certain experiments, such as new comprehensive schools with integrated curricula in Berlin and Hesse. In Italy, most of the scuola media's experiments were sponsored by the ministry.

Generally, it seems that the original stimulus for most of the novel features has come from progressive-minded educators themselves. Many of the present ideas have their origins in the pedagogically fertile years of the 1920's and have been promulgated by groups like the New Education Fellowship or similar professional associations. Training or study centers, such as the Pedagogical Institute at Sèvres (France) under the inspiring direction of Mme. Hatanguais, have been important pioneers in the movement. After World War II, the Italian Ministry of Education organized ten study centers (individually called "Centro Didattico"), each devoted to a particular aspect of public education (e.g., the elementary school, the scuola media, the relations between school and family, etc.). In West Germany, the united nation-wide teachers federations (the Allgemeine Deutsche Lehrer-Verbände, comprising largely elementary school teachers) have advocated and designed reforms for many years (since the 1920's). Varied experimentation has been carried out in private schools, which--in contrast to those in the U.S. --tend to be more progressive than the public schools. Important research was and is provided by the German Institute for International Pedagogical Research in Frankfurt, and since recent years, the Max-Planck Institute for Educational Research in Berlin. In all three countries, professional congresses and journals are the chief arenas for the debate and publication of reform ideas promulgated by teachers.

In the European countries, the teacher's functions with regard to curriculum are somewhat different from those in the United States. The European teacher does not establish the general objectives nor the general outlines nor the areas of emphasis of his annual course, but he does choose the means, the materials and methods by which he wishes to attain the determined goals. In planning his work, the teacher knows from the overall curriculum plan what his particular class has covered in previous years and is learning in other subjects parallel to his course. This awareness provides more certainty for his planning than some American teachers enjoy. On the other hand, the European teacher must observe his obligation to "cover" the prescribed objectives and portions of the subject as outlined in the overall plan; otherwise his colleagues have reason to complain when they take over from an incompleted course coverage.

[24a] Their recent notable reform plans were the "Bremen-Plan" of 1960 — generally regarded a counterpiece to the German Committee's "Rahmenplan" of 1959 — and the "Wiesbaden plan" of 1962.

And in situations where external exams[25] are given, comparable to New York State's Regents exams, the students--and the teachers--would fare badly if the materials were not covered. With regard to examinations and the pressures they exert on teaching and learning, there is a general trend among the educators in the three countries of aiming toward reducing the extent and the severity of the external examinations, which have traditionally been a scourge of European academic schools. The public generally favors the trend, but conservative intellectuals oppose it at times. This is illustrated in the recent case in Italy, where the dispute over the final exams at the end of the first completed three-year course of the scuola media drew wide newspaper coverage. (The Corriere della Sera, the leading Milan daily, under big headlines--e.g., "Esaminati dai loro professori gli alunni della terza media?"--printed articles[26] deploring the non-indicative nature of the planned internal exams; their legal validity was doubted, since the Constitution of 1925 prescribed State examinations for all diploma-issuing public schools; and there were other objections.)

Generally, two circumstances of the present developments act in support of changes in the old examination system; one is the tentative character of the revised curricula with the accompanying uncertainty over justified expectations of attainments. The other is the great influx of pupils from heterogeneous backgrounds into academic types of school, which necessitates an emphasis on

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[25] External exams are nowadays only used at the terminal point of a school for graduation or transition to the subsequent school type, but not at the end of each year (as in New York State), and not at all at the elementary school level including the post-primary terminal sequence.

[26] Editions of 31 October, 1965, 28 May, 1966, 9 July, 1966 and others.

"orientation" rather than the selective "pass-flunk" practices. (This is the motivation of the new scuola-media exam procedure, which is explained in a ministerial decree:[27] the exams cannot be based on a rigidly fixed study program, but must assess the pupil's individual ability, development and interests, his educational and social background, etc. Not "selective purposes," but "orientative evaluation" is the scope of the new scuòla media exam. The decree is a beautiful example of modern pedagogical thought in the spirit of "progressive education."

The amount of freedom in the choice of subject matter content that is left to the classroom teachers varies according to the degree of details prescribed by the ministries and also by the demands of school administrators or supervisors. The latter demands cannot be adequately assessed, since they vary from school to school. Yet the ministerial directives furnish clues that permit valid estimates of the teachers' realms of choice regarding content. For all three countries, these realms are broader in the non-academic schools and narrower for all subjects in the academic schools (especially from the 9th year level on). A feature illustrating a certain extent of choice is that of reading materials in the mother tongue and in the foreign languages. These materials (pieces of literature) may be selected from lists that the directives present for each grade level. In France an additional note specifies that each year the teachers of French and of the foreign languages decide as a group which pieces of literature are to be read that year in each grade in order to avoid repetitions. In Italy and Germany the individual teacher presumably himself chooses from the selection prescribed. The German Länder directives (but not those of France and Italy) stress the importance of letting pupils select books for individual reading and some poems for memorizing, beyond the basic common requirements.

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[27] Italy, Ministro della Pubblica Istruzione, Scuola Media Statale, Decree of the Minister of 15 October, 1965, 63 pp.

For the non-academic (and semi-academic) schools (grades 5 or 6 through 9) the teacher has more freedom. For example, the reading materials are only indicated by general categories of topic, type and historical period. One may infer from this difference in approach that the small number of graduates from academic schools is assumed to be able and obligated to master a basic canon of literature, the large number of non-academic graduates, however, not.

The Italian scuola media deserves a special comment with regard to freedom in curriculum matter. This--for Western Europe--radically new school type has been assigned an official curriculum plan of such broad design that theoretically the teacher has a similar degree of freedom as American teachers usually have. On the other hand, the official directives are supplemented by an abundance of informative and guiding materials on objectives and didactics in the different subjects. (The materials, published by the Centro Didattico for the scuola media, are fruits of several years' experimentation preceding the promulgation of the reform in 1962.)

The selection of general textbooks is usually an indicator of freedom in teaching. In the three countries alike, textbooks require approval by the ministries. From ample lists of such approved texts, and teachers (and sometimes the subject departments) may choose. There exists by now a growing supply of modernized texts that look similar to their American counterparts.

A vast if not complete freedom is left to the teacher in choosing his methods of instruction. The curriculum directives of the three countries stress the importance of initiative and imagination, that the teacher should apply in adapting his instruction to his students' characteristics. That refers not merely to teaching techniques (e.g., discovery method, group discussion, spelling exercises), but also to "didactics," i.e., the handling of the content in the way that it becomes "learning" (e.g., analyzing a problem, pointing to relationships, selecting one case as model for a generalization, etc.).

Any comments that the directives contain on the question of methods are merely intended as suggestive, not prescriptive. The extensiveness of such comments varies greatly in the official directives, from none at all, for traditional subjects in French and Italian academic schools, to elaborate discussions of several pages for "new subjects," such as civic education in Italy and France, or for new approaches to "old" subjects, such as in mathematics (in France and Germany). The most systematic and elaborate forms of curriculum directives are those of the German Länder. For each subject they contain statements of a) objectives, b) required content, c) guidelines (suggestions) for instructional practices, sometimes, e.g., including examples of topics for composition. Several circumstances may explain the consistently more elaborate guidelines in the German curriculum plans: Secondary school teaching in Germany rests more firmly on principles of didactics, methods of teaching and general pedagogy, in which all teachers receive at least a year's training. The Italian and French academic school teaching has paid little if any attention to the professional basis of teaching, and their certified teachers need no training in it. In addition, the proportion of inexperienced teachers is greater in Germany (due to the teacher shortage) than in the other two countries. And last but not least, the German school systems have advanced more in the area of internal reforms, while the Italian and French systems have concentrated on structural reforms, but move with growing emphasis now also to revisions in school practices.

In the current professional literature of France and Italy, however, the problems of more up-to-date and more efficient methods of instruction (in a broad sense) are accorded much space. Leading in this initiative are the ministries of education in these two countries, who are sponsoring (but do not themselves edit or control) periodicals on the problems of secondary school teaching, obviously in view of the recent reforms on the middle level. In Italy, the two main journals of this kind are: Ricerche Didattiche, a monthly in its sixteenth year, edited by Professor Gesualdo Nosengo (Rome), and La Scuola Media e i Suoi Problemi, a monthly in its eleventh year, edited by Professor Camillo Tamborlini (Rome), director of the Centro Didattico for the scuola media and one of the most active pioneers for this new school type.

In France, there is Cahiers Pédagogiques (with 7 to 9 annual issues) edited by François Goblot (Lyon), which is devoted to "a free exchange of opinions and experiences among the teachers on the secondary school level," as stated in the masthead. The journal has supplements called "Textes et Documents," each offering materials and suggestions on a particular teaching topic. The weekly _L'Education Nationale_, in addition, contains chiefly general informative news and articles, but also contributions on teaching practices. Both journals are issued by S.E.V.P.E.N., the publishing service of the ministry of education in Paris.

IV. CHANGES IN GENERAL CURRICULUM POLICIES

The Extent of Revisionary Activities

Since the Second World War the education ministries of the three countries have issued numerous decrees and circulars concerning changes in official programs of study. For example, the French manual "Horaires et Programmes de l'Enseignement du Second Degré" ("Programs and Schedules of Secondary School Instruction") went through fifteen different editions during the past twenty years. While some of its revisions were only minor, others were significant. Another example: between 1955 and 1966, Bavaria (Germany) issued three different versions of programs and schedules for the upper part of its *Volksschule* (grades 5-8, later 9). In Italy, too, the "*aggiornamento*" activities were lively during the last few years.

This broad activity mainly resulted from pragmatic needs, as indicated in the preceding chapter, e.g., structural reforms in the school system, changes in the socio-economic conditions. But basic concepts of the functions of school education are also changing; the ultimate, though still distant, goal is the mobilization of all human minds to full capacity. To be sure, even the most advanced curriculum plans are still far from adequate even if measured by the designers' own stated objectives. But the movement is under way; old ideological assumptions are crumbling, the shadows of the 19th century are disappearing, though more steadily north of the Alps than south. The most important breakthrough in Germany, France, and also Italy came in the early 60's, when the education ministries themselves--century-old bastions of conservatism--took up leadership for reforms on the crucial level of the middle grades.

In Germany the eleven ministers of education reached several agreements aiming at coordination of the Länder school systems, and at modernization of the teaching practices in the academic schools. The latest agreement is a nine-page document of "Guidelines and Recommendations on the Organization of Instruction in Grades 5-11 of the Gymnasien," issued in June of 1966.[28] It discusses the sequence of subjects per grade, the special character of grades 5 and 6, and questions of didactics and methods in relation to the psychological development of the students. As in this instance, curriculum reforms in the three countries typically extend to the secondary, not the primary school level.

Main Objectives of Recent Curriculum Plans

The major documents presenting the revised comprehensive curricula for the various types of school explain--in their introductions as well as in the various sections dealing with particular subjects--the general objectives of the revisions. (In France and Italy, the explanations are brief; in the German Länder, they are more explicit.) The objectives fall into two broad categories: social and intellectual.

Social objecties. In all three countries the emphasis is on the need to replace the former post-primary type of schooling (serving the majority of children) with a more thorough, up-dated, general secondary education. Children should be prepared to participate "ad una cultura e ad una società realmente moderna,"[29] which is characterized by "*le développement considérable des techniques, la transformation de l'organisation du travail* (work), *mais aussi l'évolution des esprits et des moeurs* (customs)."[30] Furthermore, "modern society demands that the *Volksschlule* today give more consideration to the scientific, technical, and mathematical as well as to the social and political realms."[31] Both the Italian and French curriculum documents refer explicitly to the national school reform laws.[32] These laws incorporate elaborate explanations of the social bases of the reforms. The French documents reiterate in brief the essence of the twofold scope of the reform: the prolongation of compulsory schooling and the improved orientation (guidance) of the pupils.

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[28] Germany, Kultusminister-Konferenz, "Richtlinien und Empfehlungen zur Ordnung des Unterrichts in den Klassen 5-11 der Gymnasien," reprinted in Bildung und Erziehung, 19/4, Juli-August 1966.

[29] Italy, Scuola Media Statale, Orari-Programmi, op. cit., p. 10

The orientation or "observation" of the pupils is emphasized as a major task for the middle level (lower secondary) in all three countries. (This will be discussed in detail in the next section.) It relates to the general curriculum objectives in that "the studies should as much as possible be adapted to the tastes and aptitudes of each child, as well as to the vocational needs of the nation."[33]

Intellectual objectives. In part, these are an integral feature of the social objectives (as some of the references above indicate). In a concise statement (of the Italian document), they concern the "democratic principle of raising the level of education and instruction individually for each citizen and generally for all the Italian nation, thus increasing the capacity for participation and the contribution to the cultural and civic values."[34]

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[30] France, *Le Premier Cycle*, *op*. *cit*., p. 1.

[31] Germany, Bavaria, Introduction of the "Richtlinien für die bayerische Volksschule," in "Amtsblatt des Bayer. Staatsministeriums für Unterricht und Kultus" of 5 July, 1966.

[32] In Italy, the law of 31 December, 1962, in France, the decree of 6 January, 1959 with the supplementary decree of 3 August, 1963.

[33] France, *Le Premier Cycle*, *op*. *cit*., p. 1.

In another dimension, the intellectual objectives refer to the curriculum content by stressing the need for a careful selection of the materials taught in each subject. French and German documents dealing with academic schools explicitly reject past tendencies to strive for "encyclopedic" knowledge; the equivalent Italian document warns not to weigh down the pupil's mind with "unassimilated information," with "raw material" ("materiale bruto") that does not become formative ("che non diviene cultura") but provokes aversion to learning. . . ."[35] Similarly the statement in the Bavarian directives for the Volksschule: "The instructional content must carry formative substance ("Bildungsgehalt") which can be personally comprehended, which will generate valid insights, and will influence attitudes."[36]

Statements such as these hint at the twofold problem that the revisions try to cope with: the overburdening of students (mainly those in academic school programs) with unmanageable amounts of work. Parents, physicians, psychologists and the teachers themselves have, for years, protested against the overload, and the newspapers in the three countries abound with articles on this topic. The main cause of the overload (well known also to American educators) is the enormous increase of knowledge in most fields, not to mention the ever broader realms of life that the schools are expected to include in their instructional programs (e.g., civics, hygiene, sex education, safety education). It is obvious in the European systems: the streamlining of content requirements has not kept pace with these additions.

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[34] Italy, Scuola Media Statale, op. cit., p. 9.

[35] Italy, Orari and Programmi--Ginnasio e Liceo Classico, p. 3.

[36] Germany, Bavaria, "Richtlinien für die Volksschule," Amtsblatt of July 9, 1966.

The revised curriculum directives take account of the problem in their introductory comments which stress the importance of applying sound criteria for the selection (limitation) of subject matter, and urge the distinction between relevant and less relevant facts to be taught. This rather vague advice is, in a few instances (e.g., the plans of Berlin and Hesse) supported by indication of basic facts or insights to be mastered and by examples of learning materials helpful in the teaching process.

Special mention should here be made of an instructional method that has gained wide attention among German educators during the past few years. It is called "Exemplarisches Lehren" and compares with the American "teaching through models." Renowned supporters of this approach are, e.g., Josef Derbolav (Das Exemplarische im Bildungsraum des Gymnasiums, 1957), Martin Wagenschein (Das Exemplarische Lehren, 1954), and Hans Scheuerl (Die Exemplarische Lehre, 1958). In brief, the method means to impart--if possible, through concrete experiences--"categorical, basic notions and key insights"[37] on which further learning can be structured. It attempts to cope with the overwhelming mass of content matter, by selecting essentials, by illuminating the structure, the typical, and the generalities.[38] As can be expected, there are controversies over the "Exemplarische Lehren," which lends itself better to some subjects (the sciences) than others (history, literature). The official directives rarely mention it in their recommendations. But all teacher training institutes include it, to a greater or lesser degree, in their didactics courses.

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[37] Ernst Meyer, Praxis des Exemplarischen, Stuttgart, Klett, 1962, p. 150.

New Procedural Approaches

Aside from the quantitative problem of instructional content (and the related considerations of method), the qualitative characteristics of the school curricula have been given attention. With respect to the entire school system, the discussion is cursory in France and Italy; here the school types of the systems are treated separately.[39] Therefore the French and Italian views on aims and characteristics of the new curricula will be analyzed in the section dealing with the middle level. Among the four German Länder included in this study, the practice varies: Bavaria and Northrhine-Westphalia follow patterns similar to the Italian and French (i.e., separate treatment of characteristics), while Hesse and especially Berlin have taken a total-view. In the following, the guiding ideas of these two designs will be discussed. Their direction appears to point the way for other German (if not European) school systems.

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[38] See definition in Josef Dolch, Grundbegriffe der Pädagogischen Fachsprache, 3rd ed., München, Ehrenwirth, 1953, p. 59.

[39] The ministerial departments for the different school types still work rather independently from each other; in Italy they are housed in different buildings: the department of the scuola media is located miles away from the main building of the ministry of education.

The Hessian ministry of education issued its comprehensive curriculum plan[40] in 1956-57, two years before the Federal German "*Rahmenplan*" (of 1959) was published, and several years before the other *Länder* arrived at their present modernized versions of curriculum plans. The commission preparing the plan included educators from *all* school types, and before the plan was published it was submitted for criticism to 1) teachers of all categories, 2) various interest groups and professional organizations, and 3) parents (i.e., representatives of parents' organizations). In Hesse, the parents are accorded--by post-war constitutional provisions--a greater influence on school policy and practice than in any other German *Land*. This development may be traced to American inspiration during the Occupation years.

The Hessian plan was designed for the existing pattern of school structure, namely four years of common elementary school followed by one of three devices: either four years (and since 1962 five years) of *Hauptschule*, or six years of *Realschule* or nine years of *Gymnasium*. Thus a structural "commonness" of schools has not been attained, but Hesse has established several entirely common public schools running from 1st through 13th grade, which have become showpieces for visiting educators from all over. Many more such schools are projected for the future, at the rate that the communities desire them and the *Land* government is able to give financial support.[40a]

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[40] Germany, Hesse, "Bildungspläne für die allgemeinbildenden Schulen im Lande Hessen," in *Amtsblatt* of March, 1956 and January, 1957.

[40a] See *Schule unserer Zeit: Bildungswege in Hessen*, publ. Der Hessische Kultusminister, Wiesbaden, n.d. (1966), p. 44; and Landes-Verband Hessen der Gerwerkschaft Erziehung und Wissenschaft, "Auf dem Wege zur Gesamtschule," Frankfurt, n.d. (1965).

The traditional tri-partite educational structure, while still maintained in Hesse, is not, as in the other German Länder plans, justified on the grounds of a conceptual division of (adult) occupations into three categories (practical, clerical-technical, executive-professional), with their concomitant three different sets of purposes and practices. In fact, the typology of three occupational groups is rejected because the job requirements--especially today--are too complex for any direct correlation with the three different school types. Moreover, in our rapidly changing economy it cannot be projected for ten-year old children what the requirements will be for the occupations they will take up as adults. The Hessian plan stresses the unity of basic educational concepts that govern the objectives of curriculum plans. Central to these objectives is the view of a common society whose members, while pursuing different occupations, share common needs of preparation for modern living. Consequently, a set of guidelines is presented for the policies and programs of studies in all schools alike:

1. There must be a unified approach in planning the program in the various subjects, e.g., the program for arithmetic/mathematics is planned by a committee of educators from all levels for the entire course of grades 1-13. General points of emphasis in content and method are determined, especially for the parallel tracks (grades 6-9) of the different school types. Such coordination has not only the pragmatic advantage of facilitating the adjustment of students transfering from one school-type to another, but also that of better orientation about the attainments-to-be-expected.

2. The subject committees are to strive for limitation of

content details (principle of concentration) and for means to raise the efficiency of teaching (including use of audio-visual aids, the public media, etc.).

3. Subjects are to be re-structured--the traditional analogy to university disciplines is to be replaced by an orientation of subjects toward the realms of life which the subjects are to serve. Thus subjects should be combined and planned together, and, as far as possible, taught in a coordinated, if not altogether integrated, manner. (This is called "Gesamtunterricht"--"total instruction," a misleading term, since it recalls the one-room schoolhouse style or the "Jack-of-all-trades" type teacher, both of which are certainly not meant in this case.)

4. The revisions in the program of instruction must be realistically based on changes in society. Diminishing family education should be compensated for by school instruction that combines such traditional courses as needlework, cooking, and (parts of) biology into one course that centers on "family living"; this course should be offered to boys, too. The schools should also teach hygiene as well as typing, and traffic education. Such courses call for methods that aim not merely at intellectual learning but also at learning of behavior and acquisition of skills. The same applies, e.g., to civic education, which is to be supplemented by activities, group work, and the practicing of skills required of a modern citizen.

5. The traditional notions of child psychology must be reexamined in view of the fact that modern mass media expose children to a wide range of stimuli. Teaching should connect with, rather than ignore, what children learn through T.V., radio, advertising,

etc. Sex education is one case in point in this context.

6. A foreign language (English) must become a regular subject for all Volkschule students to broaden their horizons and facilitate transition to academic schools.

These overall principles have been translated into the specific curricula for the three school types. They were sufficiently advanced to anticipate the needs of the coming years, needs which moved the other Länder, during the last decade, to issue curricula revisions that brought them closer to the programs and guidelines of the Hessian school system.

The Most Advanced Approach to Curriculum Design

In all the official publications of the three countries under study, the most modern ideas on curriculum design are found in a statement of policies for the planning of curriculum guidelines for the education system in Berlin. This policy statement, issued in March of 1965 as working paper for internal use, represents the pedagogical application of a general reform program which the Senator for School Affairs, Dr. Karl-Heinz Evers, presented to the public in 1964.[41]

Several features of the Berlin policies closely resemble those of Hesse. The curriculum plans are worked out by committees comprising educators from all school types and levels, so that a vertical coordination for the subjects throughout all grades and a horizontal coordination for the various school types (that follow after grade 6) will be accomplished. Coordinated planning for the different subjects and limitation of content are governing principles as they are in Hesse. To facilitate limitation of content, the curriculum guidelines are to set certain basic objectives in knowledge, skills, and behaviours to be attained at various levels in the different subjects. For additional learnings a "didactical rank order" is suggested that leaves the teacher broad realms of free initiative. Furthermore, teachers should try to distinguish between "exemplary" (model) and "orientative" (informational) types of learning in their instructional planning.

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[41] Berlin, Senator für das Schulwesen, Denkschrift zur inneren Schulreform, 1964.

In other important aspects the new Berlin policies reach beyond those of Hesse. They reflect a commitment to modernity not only in theory but in concrete attempts to infuse the curriculum with realistic elements that will prepare today's children for the changing demands of urban life. The following brief summary renders the main points of the Berlin policies.

Since we know so little about the future external conditions of living, educators must foster more than ever the inner human capacities and the abilities of self-education and initiative. They must strive, through genuine personal encounter with their students, to help them develop self-awareness and self-realization.

In contrast with the traditional ideology of "Bildung" with its dualistic concept of higher education for an elite and popular education for the masses, the modern school must be congruent with a pluralistic and highly mobile society. This includes the recognition of interpersonal responsibilities and of the fact "that no one alone possesses the truth." Also in contrast with traditional ideology, the school must train young people for the realities of the world, not against them. (Many German apostles of culture still look disdainfully at the "materialistic" realms of practical life and technology.) Educators should develop in the students an understanding and respect for the complex world of industry and commerce as an achievement of human minds and actions. They must prepare the young to find their place in the competitive occupational structure which is largely characterized by corporate organization, team work, and the impersonal discipline imposed by the composite patterns of specialized functions. Preparation for future work can no longer be practical training in one particular permanent occupation, but (in view of constant change) it must include more theoretical foundations and general abilities that will facilitate adaptation to new functions as well as advancement within a field of work.

The recognition of modern realities--in science and technology, and in the economic and political spheres--must include the awareness of contrasts and contradictions. The school must help prepare young people to cope rationally with conflict, as opposed to the tradition of ignoring or abhorring genuine conflict while idealizing harmony, albeit an illusion of harmony. (This seems a significant objective, in view of the much-needed maturing of German social and political attitudes.) Ample attention is given to the political education of the young citizens, with emphasis--beyond the learning of facts and insights--on political behaviour. The active participation as well as the passive yet critical role of citizens is considered in this training. The school is urged to counteract the tendencies toward apathy and resignation by teaching not only an understanding of the process of power formation in a democracy but also by providing the climate for practice in cooperative work, in teams, committees, panels, etc., including the routines of democratic procedures.

Because of the general increase in leisure time, the Berlin plans call for the development of knowledge, tastes, and skills in activities that help enrich the personal life. Proper use of television, radio, and newspapers are related to this phase of education. Finally the schools should actively cooperate with the other education forces: the home, the churches, youth groups, community organizations, and institutions for adult education.

These general principles are finding application in a number of novel features, some of which seem of particular interest to American educators (only these will here be mentioned):

1. The teaching during the first primary years (1-4) should capitalize on the manifold "secondary experiences" which children gain through the public media; radio and television must have a place in primary education.

2. A program for basic technical education must be planned for grades 1-10; on the secondary level it will be integrated with manual work, mathematics, and the sciences. Definite attainment goals in technical concept formation will be set for the end of the 6th, 8th, and 10th grades.

3. The subject "household work" (home economics) for boys and girls in common must be oriented toward modern social conditions as well as toward the purposes of basic technical education.

4. Attainment goals for the end of the 6th grade will include understandings in the use of radio, television, and movies.

5. An instructional program in the use of newspapers and magazines is proposed for grades 7 and 8. For the end of grade 8, attainment goals are to be set for the learning of proper use of newspapers, films, radio, and television; similarly for grades 9 and 10.

6. Grades 9 and 10 (the final years for the majority of students) should consider the aspects of increased leisure time in co-curricular programs (electives or workshops) devoted to photography, movies, T.V., theatre, school newspaper, literature (especially juvenile contemporary publications), play-acting, astronomy, politics, art, music, dance.

7. Grades 9 and 10 will also include realistic orientation programs about the world of work, including practicums in industrial and business firms and social agencies.

8. Programs for sex education will be developed. The same also for traffic education.

9. The adequacy of the curriculum in the sciences and in political education will be examined. For science on the highest grade levels (11-13), a program for an interdisciplinary approach will be designed. (The same approach is already operative in these grades in political education.)

10. In physical education, a systematic cooperation with (non-school) sports clubs is recommended, especially in the area of co-curricular activities (interest groups, teams, etc.).

The details of these planned innovations and revisions are being worked out by committees and subcommittees. For special problems experts outside the school system are being consulted. Deadlines were set for the different steps of the work that extend from the Spring of 1965 to the end of 1966. It will be most interesting to observe the final outcome of this truly modern curriculum design for the schools of Berlin.

V. INNOVATIONS ON THE MIDDLE LEVEL

The focus of the recent reforms center on the first years of secondary schooling, when the educational careers of children and thereby their future life chances are decided. The importance now accorded to this school phase is made evident in the multitude of laws and administrative provisions aimed at a fundamental reconstruction of the middle grades. In Italy, the collection of all the laws and provisions concerning only the new *scuola media* comprise a volume of 550 pages.[42] In France the corresponding collection (up to 1964) concerning "Le Premier Cycle" is a book of 256 pages.[43] In Germany, the situation is different, since the middle school years continue to be separately merged with the existing three school types. While extensive revisions were undertaken on this level in all the German *Länder*, no special collection of the respective documents has been made. The latter must be culled from the various *Länder* plans and programs of study and from several documents of the *Ständige Kultusminister-Konferenz*[44] (the Permanent Conference of Education Ministers of the *Länder*), located in Bonn.

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[42] G. di Stefano, ed., *Raccolta delle disposizioni legislative e amministrative sulla Scuola Media*, Movimento Circoli della Didattica, Roma, 1966.

[43] France, Ministère de l'Education National, *Le Premier Cycle*, *op. cit*.

[44] The latter documents are collected in *Sammlung der Beschlüsse der Ständigen Kultusminister-Konferenz*, *op. cit*.

The following analysis of reform provisions for the middle level will concentrate on: A) organizational structure, B) enrollment of students, and C) curriculum revisions for non-academic education. Special features in methods, individual assistance, evaluation of students, will be included in the last chapter.

Organizational Structure

The structural revisions of the schools have already been mentioned in Chapter II. They differ in the three countries. Italy undertook the most radical change by introducing the scuola media unificata in 1962. This school replaces the former three parallel school types: scuola media inferiore (academic), scuola d'avviamento (general and vocational training combined), and the terminal elementary school classes. France chose a middle way (and a very gradual system of implementation): the four-year "premier cycle" of secondary education now receives all children alike. It consists of two "classes d'observation" and two "classes d'orientation." During the two years of "observation classes" there is a common curriculum for all, but the children are divided into parallel classes of different academic standards, corresponding to the old-type different schools: classical and modern I (for the "long" academic course), modern II (for the "short" academic course), and "transitional classes" for the group of lowest achievers (still comprising about 50 per cent of the age group). These differentiated "observation classes" provide for all children procedures for individual evaluation and orientation (try-out opportunities). Those who prove to be able students pass on to the two-year "classes d'orientation"--again following identical curriculum programs--while the less able students (i.e., most of the "transition classes" complete their schooling in two years of "classes pratiques."[45a]

The West German Länder introduced the least organizational changes. The majority of children continue to attend the upper part of Volksschulen, now called "Hauptschulen" (often centralized schools for pupils from several feeder elementary schools), for which now upgraded, diversified programs are being developed, while 12 to 15 per cent of the children transfer to the semi-academic Realschulen and 12 to 17 per cent transfer to Gymnasien. There are, however, beginnings of common first two classes on the secondary level (grades 5 and 6) in several German Länder. They are called "Förderklassen" ("supportive" or "promotive classes") or "Beobachtungsklassen" (observation classes) and may be organized at either a Volksschule or a Gymnasium (also sometimes at a Realschule). Originally designed for the purpose of providing try-out opportunities and better orientation before the final decision of further school careers, the Förderstufe was the main feature of the comprehensive "Rahmenplan" (of 1959) for West German School Reform.[45] The plan proposed that all children, including future Gymnasium students, would go through the common middle level, where some subjects are taught in heterogeneous groupings and some subjects (English, mathematics, German) are taught in homogeneous sections that are adapted to different abilities. But the scheme aroused so much resistance at the time that the whole Rahmenplan never got off the ground. A few years later, in 1963, the ministers of education themselves recommended this feature as one approach for improved identification and fostering of latent talent reserves. Finally, the chiefs of government of the eleven Länder, in their Hamburg Agreement of October, 1964, gave their official sanction to a "Förder-oder Beobachtungstufe" (observation cycle) on the 5th and 6th year level. It is gradually being tried out in a number of schools.

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[45] See Chapter I, p. 4, footnote 1.

[45a] The transitional classes seem slow in building up. Recent statistics obtained from the French Education Ministry show for 1965/66 that among the roughly 300,000 non-academically oriented sixth-graders (comprising half of the age-group) only 6.6% attended transitional classes The vast majority remained in the final primary school classes ("Fin d'Etudes Primaires".)

Where these "Förderklassen" have been instituted by now, usually just a few clearly academic-oriented children attend them; they largely take in children from less educationally advanced families, providing them with "try-out opportunities" and heightened chances of adjustment to subsequent academic schools. In this regard these classes closely resemble the French "classes de transition."

Despite their lopsided academic balance, the Förderklassen experiments produced significant numbers of students who after the two years transferred to a Gymnasium and performed there relatively well. This has been demonstrated by "follow-up" studies in Hessia and Lower Saxony, the two Länder with the largest number (several dozen) of schools with Förderklassen.[46] The success of these classes rests largely on a system of differentiation of instruction (adapted to ability groups), modern methods such as group work of the students, individual attention by the teachers, and a minimizing of anxiety (over marks, promotion, etc.). Comparisons of these features with similar French and Italian experiments are found in Chapter VIII.

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[46] Among the sizeable literature on this topic, two accounts contain the essential description and evaluation of the experiments: Der differenzierte Mittelbau, ed. Gewerkschaft Erziehung und Wissenschaft, Neue Deutsche Schule Verlag, Essen, 1957. Fritz Uplegger and Hans Goetz, Die Förderstufen-ähnlichen Schulversuche in Hessen, Hannover-Berlin, Schroedel-Verlag, 1963.

The question of a common school (or common classes of instruction) at the middle level arouses strong controversy in all three countries. Italy introduced the new scuola media against violent resistance. (Among others, one of the most renowned professors of education, who is ordinario of the Istituto Magistrale at the University of Rome, explained his opposition in a booklet, Contro la Scuola Unica.[47] And in the opinion of some influential personalities, it is not even certain that the scuola media unificata will survive. The reasons for the opposition include overt motives: the fear of dilution of standards because of the highly heterogeneous composition of classes, and the "loss of time" for the covering of the academic programs in their traditional form and extent. The representatives of the classical type of education, in particular, claim that Latin must be started in the 6th--and in Germany even the 5th--school year, or the entire full program (including Greek, a modern language, and all the literary classics deemed necessary for this humanistic type of education) would suffer. The Italian opposition, such as the one expressed by Professor Volpicelli, rests its case strongly on theoretical views which conceive the different school types as oriented on particular ideals which would be lost in a mixing of the types. (See Chapter II.) The German and French counterparts, in turn, rest their stand on the functional benefits to the students, who--categorized in three broad ability groups--are presumed to profit best from different styles and content of teaching.

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[47] Luigi Volpicelli, op. cit., Armando, Roma, 1960.

The less overt motives for the opposition to common lower secondary grades rest on sociological factors, such as vested interests in tradition and the different prestige attached to school types and their teachers. There is very little cooperation or professional contact between the different categories of teachers. (The academic teachers are called "professors" in France and Italy and carry similar academic titles in Germany, while all the other teachers are "*instituteurs*," "*insegnanti*," or "*Lehrer*,"--plain teachers.) The chasm between the types of school extends from the local levels to the ministries. These facts explain the difficulties that had to be overcome even where small advances have been attained in the direction of common middle level classes for the sake of better decisions on school careers and a general upgrading of popular education.

Enrollment of Students

The selection of students for secondary school types has changed greatly in the three countries. The basic policies for admission underwent an almost complete reversal in recent years: once decidedly selective, the academic schools permitted access only through the narrow gates of admission examinations. These exams, imposed on 10 and 11 year-old children as criteria for decisions that would affect their future life careers, have been recognized as cruel, unfair and inadequate in most European countries during the 1950's. France and Germany first replaced the examinations by more moderate forms of observed performance in "normal" classroom teaching situations (including tests) during a trial period lasting usually two weeks. The emphasis was still on "selection" and "rejection of the unfit."

Then came the reversal of policies during 1962 and 1963, with the recognition of the need to channel many more children than before through academic schools. Consequently, not only were the barriers let down, but deliberate efforts were started to get all children of above-average ability enrolled in the academic or semi-academic schools. For this purpose of more adequate assessment of the children's potential, France and Italy began taking in all children alike into the first stage of secondary school. The socio-political spirit of this innovation is illustrated, e.g., in a French ministerial directive on "recruitment" for the observation classes which begins: "La démocratisation du cycle d'observation pose deux problèmes distincts . . ." (author's underlining). As the second of these problems is stated the need "to convince eventually the families of the students of the true interests of their children."[48] To have parents of rural and working-class background embrace higher educational aspirations for their children has now become the crux of the school enrollment problem. One way to cope with the indifference of lower-class parents and children is the French innovation (in 1963) that no pupils can remain in the elementary school beyond twelve years of age. This rule eliminates the usually large number of repeaters in this school who have a negative influence on scholastic standards and social behavior. Such retarded students will be included in the transfer to classes of lower secondary cycle (the afore-mentioned "classes de transition"). Here, along with other non-academically oriented children, they will have opportunities to catch up in the more challenging environment of a "collège."

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[48] France, Le Premier Cycle, op. cit., p. 181.

In France and Germany, before decisions on the children's school careers are made, teachers must inform the parents in writing about the type of secondary education recommended for their child. Where parents hesitate to decide for academic training notwithstanding the teacher's recommendations, the teachers must arrange personal meetings with the parents and try to persuade them. The ministries of education are publishing pamphlets with detailed information on school types, future career chances, costs of training, financial returns to be expected, etc.[49] These are sent home through the pupils, and the parents have to acknowledge receipt.[50] Usually the parents are also invited to orientation meetings at the school.

In addition, the incentives of (governmental) financial assistance are increasing, as are transportation aids (school buses, reduced or free commuter tickets). The mass media (radio, television, newspapers) are regularly put to the service of broad public information, and the ministries, for the past few years, have maintained public relations departments that plan information campaigns, publish materials, and offer counseling services.[51]

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[49] In France, e.g., a typical pamphlet is "Que Ferez-vous de Vos Enfants?" published by the Ministère de l'Education Nationale, Paris, 1963. In Germany, an example is "Aus Ihrem Kind soll etwas werden" (Your Child Should Get Somewhere), published by the Bavarian Ministry of Education, Munich, no date (1964). These pamphlets are designed in "advertising" style, with pictures, graphs, and are in popular language.

[50] The procedures of family information are spelled out in detail by official directives, such as "Circulaire du 24 mars, 1962," reprinted in Le Premier Cycle, op. cit., p. 182.

All these measures are efforts at overcoming the ignorance of the broad public and its mistrust of school authorities in order to create a more supportive attitude for expanded school attendance. This is not an easy job because of the strong tradition of public indifference to school matters that developed as a corollary to the highly centralized administrative systems of the three countries. The complex structural patterns of the various school types (beyond the primary level) as well as the continuous revisions and reforms cause further bewilderment that impedes popular confidence in the education systems in the three countries.

Curriculum Revisions for Non-Academic Education

(Note: This section will analyze the general curriculum patterns; the next two chapters will deal with the detailed features of the programs of study.)

A common comparative treatment of the three countries in regard to curriculum can only extend to broad characteristics and practices. As to the instructional programs, there is the complication that only Italy and France begin their middle (the early secondary) level after five years of primary school, while the German *Länder* begin after four years (except Berlin which begins after six); besides that, the Länder differ among themselves in their curriculum designs and emphases.

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[51] The respective French instructions read: "Une campagne d'information par la presse et la radio est prévue sur le plan national. Il est nécessaire que les conseils départementaux d'orientation utilisent dans toute la mesure du possible ces mêmes modes d'intervention." *Ibid.*, p. 183.
In some German regions, university students (e.g. of Freiburg and Frankfurt) have recently volunteered to conduct, in rural areas, campaigns ("Bildungswerbung") for enrollment in Gymnasien.

Several novel characteristics distinguish, more or less, all the present curriculum patterns from the earlier models for the school level under study. These innovations concern mainly: 1) the similarity of instructional programs for all children at least during the first two years following the primary school; this includes, e.g., the offering of foreign language also to non-academic students; 2) patterns of differentiation (on the 8th grade level) for non-academic students, based on abilities and preferences; this feature, which gives capable students the chance of more advanced learnings than their schools formerly offered, is found mainly in Germany.

Extension of "Commonness" (or similarity) of School Programs. The common school program is most fully realized in the Italian *scuola media*.[52] All pupils during the first year (entering from 5th grade of elementary school) take ten subjects: religion, Italian, social studies, modern foreign language, mathematics, general science, practical work ("*applicazioni techniche*"), art, music, and physical education, a total weekly schedule of twenty-five hours. The second year continues with the same subjects but for two important differences: the two hours of practical work and the one hour of music become electives, and a-much disputed--combination of "Italian with elements of Latin" is taken by all pupils for nine hours a week. The third year, in turn, drops this combination; instead it offers straight Italian (required) and straight Latin (as elective). The other two electives--practical work and music--are carried through the third year.

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[52] See chart XIII

To sum up, there is some differentiation. The less able children will elect practical work, and the able children, in the third year, elect Latin. But the essential point is that all children participate in the required introduction to Latin "within Italian" in the second year, thereby benefitting from a unique tryout opportunity in an unconventional, non-rigid setting. This is an innovation of socio-political impact, since knowledge of Latin has always been the dividing line between the "educated" and the "non-educated" classes. A further novelty is the course in "practical work" for all children alike during the first year of *scuola media*. Both this and the Latin feature reflect the aim of greater "democratization" in the school.

In France, the common program of study has been instituted only for the first two secondary school years (not three as in Italy), in the "*classes d'observation*."[53] Whether in *lycées*, *collèges d'enseignement général*, or the new comprehensive *collèges d'enseignement secondaire*--all 6th and 7th grades (still called in the old *lycée* manner of downward counting "*sixième*" (VI^e) and "*cinquième*" (V^e) follow the same schedule of eleven subjects: mathematics, observational science, history/geography, civic instruction (only 1/2 hour weekly), French, Latin in the classical sections (and in its place science lab work in the other sections), modern language, drawing, music, manual work, and physical education. The total schedules per week are low: only 24-1/2 hours. These are supplemented, however, by one half-day weekly in the

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[53] See charts III and IV.

"open air," (i.e., for sport activities).

Different from the Italian system, the French includes no electives. The perennial question of an early start in Latin for the students aiming at the classical type of education is solved by maintaining entire classical sections from the first year of secondary school on. (Italy with its provision for Latin as an elective in the third year no doubt also maintains different class sections composed on the criterion of Latin.) The decision for Latin is made earlier than in Italy: after the first trimester of the *sixième*. That means, during the first 3-1/2 months of the secondary school level, the children are taking, besides their regular beginning course in a modern language, a very full dosis of French. The latter includes some linguistic elements that serve to evaluate the pupils' potential for Latin. After this first trimester, French is reduced for those pupils who may enter the classical sections with Latin. In sum, this system, too, has instituted orientation opportunities for academic careers, which in theory are available to all, except the lowest ranks of students.

The pupils who do not elect Latin at this point have another chance of opting for the classical sections at the end of the first year (*sixième*); for them the following year (*cinquième*) will have an adjusted program of studies to enable them to catch up with the regular beginners of the classical sections. Vice versa, "dropouts" from the classical sections who, after the first year, transfer to "modern" and "technical" sections receive additional modern foreign language instruction to catch up in this field. These features are examples of the several new provisions for easier transfer between the different sections or branches outside the ordinary points of starting or transfer. From the 8th school year on, however, such individual deviations are much more difficult, since the programs of study from then on follow increasingly divergent patterns.

In Germany the curriculum situation is more complicated than in France, not only because of the three different school types that follow the first four primary grades, but also because of the different patterns in the various Länder.[54] A comparison of the new with the old programs of study shows that generally on the 5th and 6th grade level the similarity in programs for the three school types has increased. But nowhere can be found the degree of identity for at least the two first post-primary grades as in Italy and France (except in Berlin where the common elementary school runs through grades 5 and 6). One subject that is generally allotted more time in the Hauptschulen (non-academic) than in the Gymnasien is religion (see Chart X), again except for Berlin that does not include religion as a regular school subject(but as one available after school hours). Another subject that accounts for differences is manual work (shop) which is taught only in Hauptschulen. In the Gymnasien, on the other hand, the study of the second foreign language begins with the 7th grade, now uniformly by agreement among the Länder governments. This makes transfers from other school types more difficult.

On the credit side of the ledger is the fact that since recent years mathematics is scheduled for four hours weekly in all schools (on the middle level). Another major subject, English, has been introduced (in most cases since the early 1960's) as a regular feature in all, i.e. also the non-academic schools. This innovation facilitates any later-than-normal transfers of pupils to academic or semi-academic schools, especially since the most recent plans for the Hauptschulen (e.g., in Bavaria and Northrhine-Westphalia) have increased the weekly hours devoted to English.

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[54] See, for example, Charts VIII,IX, and X for Länder differences in the semi-academic and non-academic school programs.

A transfer to a classical Gymnasium at a later than the ordinary starting point (the 5th grade) remains as difficult as before, since this school begins with Latin, which is not offered at any other school type at this level. Different from the French system (and the Italian, of course), the German systems offer no "try-out" opportunities in the classical branch of education. The "Latin" Gymnasium has its own program, and--as the recent Hessian information booklet on the public schools clearly states-- ". . . if a child is to attend a classical Gymnasium, this decision must be made already at the time of transition from the Grundschule (primary school) to the Gymnasium."[55] For proper perspective it must be added that this type of Gymnasium attracts only a minority of children and that classical education, since the turn of the century, has ceased to play in Germany the eminent role that it still plays in the "Latin" countries, such as France and Italy.

Nevertheless, the issue of foreign language studies (modern and classical) still dominates all planning for curriculum reform and easier transfer possibilities (for students) in Germany. It is the main reason why a common middle stage for observation and try-out opportunities, as suggested in the Rahmenplan (see Chapter

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[55] Schule unserer Zeit - Bildungswege in Hessen, ed. Hessische Kultusminister, Wiesbaden, n.d. (1965).

II), was strongly opposed by those influential in school politics. The *Gymnasium* people maintain that their school must run for nine years to accomplish its objectives, and that the 5th and 6th years are too important to leave them to any "common" arrangement of instruction, let alone to the *Volksschule* teachers. Even with the inclusion of a foreign language for all children at the 5th year level (except the slow learners), the *Gymnasium* teachers point to differences in approach, objectives and required attainments between the two school types as reasons for their insistence on keeping the old system of separating the children after the 4th grade, the earliest point in all of Europe.

In the future, perhaps, this traditionalism may be modified by two developments: one is the successful experimentation with "*Förderklassen*" (see above), and the other is the general upgrading of the goals and practices of instruction on the upper level of the *Volksschule* (grades 5-9) i.e., the new *Hauptschule*.

Patterns of Differentiation in Non-Academic Education. In the academic schools of the three countries the differentiation of parallel courses as yet does not begin on the middle level, except that in France and Germany there is the choice between classical and modern language sections (or schools). Similarly, the semi-academic schools (in France and Germany) follow unified curricula, except for Berlin and Bavaria.[56] The Berlin *Realschule* provides, on the 7th and 8th grade levels, four weekly hours of electives that either add academic substance (choice of French or math/science) or art courses or manual training. The Bavarian *Realschule* goes farthest in the direction of vocational training in this school type: it provides, in the 8th grade, up to ten hours of electives in combinations that have either a technical, a commercial, or a practical orientation. One minor differentiation in all semi-academic schools exists in manual work: the girls are given household instruction, the boys crafts or shop training. The same practice, of course, prevails in the non-academic schools and in the academic schools wherever the subject is included.

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[56] See chart IX

The most significant patterns of differentiation are those introduced during the last few years in the German Hauptschule. Following the inter-Länder agreement on the strengthening of this school type and the uniform addition of the 9th grade, new plans for the school have been worked out. Among the four Länder included in this study, three issued their latest revisions early in the summer of 1966, and the fourth, Hesse, has already gone ahead with the establishment of 150 Hauptschulen, many of them centralized rural schools, which receive special financial support.[57]

The novelty and essence of the Hauptschule is the differentiation of the program of study from the 7th grade on. The patterns vary from Land to Land (and probably from school to school, according to the qualifications of the available teachers; but basically the system aims at adjusting the combinations of subjects (and, within these, the style of instruction) to ability groups of the students; moreover, specialized teachers (who in their training majored in one particular subject) are replacing the all-around grade teachers at least from the 7th, if not from the 5th, year on in several (but not all) subjects.

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[57] Information for an interview with Dr. Krog at the Hessian Ministry of Education in Wiesbaden in June of 1966.

The subjects are divided into "Kernfächer" (core subjects) and "Kursfächer" (course subjects). The "core subjects" (not to be confused with the American "core teaching" of the social studies with English, etc.) are basics that are taken by all students in common. They always include religion, social studies, nature studies, German, and the so-called "technical subjects" (physical education, music, art, manual work, home economics, etc.). The "course subjects" vary in number: as a minimum they consist of English and mathematics; these two subjects are not electives, but each is divided into ability groups. As electives, the following "course subjects" are offered: German (supplementary to "core" German), physics, chemistry, sometimes biology, also supplementary music, crafts and--in Bavaria--typing, stenography, technical design, advanced sewing, photography.

The number of the fixed hours for "core subjects" varies from 18 to 28 per week (it is higher in the Catholic-oriented Länder, where alone 4 weekly hours are given to religion); and the total of required hours per week is 32 or 34. The "course subjects" comprise from 4 to 12 weekly hours (Bavaria representing the lower figure, the other Länder ranking at various higher points in this respect).

The choice of "course subjects" or ability groups depends on the students' preferences and achievements. English, for example, though listed as a regular course offering, is usually open only to students with minimum grades of C in German (lower achievers have to take additional basic German). The abler students are promoted in several major fields to the point that they may in the end qualify for transfer to either a Realschule or a Gymnasium. This is an answer to the problem of easier "Übergänge" (transfer opportunities), which looms so large in all the debates over reforms.

One feature of the Hauptschule, which has been given much attention in the new plans, is the introduction of the students to the world of work. Berlin, for example, includes from the 7th grade on a subject called "Arbeitslehre" (occupational studies) for all students. Most Länder, however, concentrate on this element at the 9th grade level. Therefore it will not be further discussed here, although it represents an interesting novelty in German public education.

The Länder guidelines for the new Hauptschule reflect much thoughtful, modern thinking on an upgraded popular education. They emphasize individualization of teaching, student work with partners and in groups, and close coordination of instruction (in this context, e.g., the Northrhine-Westphalian guidelines of 1966 use the term "die Teamarbeit," but not meaning "team-teaching" in the American sense). References to the need of adjusting the school to the conditions of modern society are frequent. In particular, the Bavarian and Northrhine-Westphalian Hauptschule has introduced coeducation (long established in Hesse and Berlin). Additional changes toward modernity in Bavaria are reflected in the directives (of 1966) which state that rural schools should follow the same principles and requirements as the urban schools, and that the education of girls should adopt the same requirement as that for boys. ("Also for girls, the instruction shall pay attention to self-reliance and logical perceptions in learning, and shall foster rational thought as well as technical interest.")[58] Above all, the guidelines offer precise, yet not binding, suggestions on the procedures of differentiated teaching. Much freedom is left to the schools in the manner and speed of its implementation. It will take years until faculty, administrators and parents adapt to the new system. Furthermore, the great shortage of teachers is delaying the full development.

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[58] Bavaria, Amtsblatt of 5 July, 1966, p. 191.

VI. DEVELOPMENTS IN SUBJECT PROGRAMS

The following discussion of subject programs for the three or four grades of the middle level intends to show primarily what content (in broad outlines) and what emphases in instructional goals and methods are included in the official plans for the subjects examined, and what new elements have been introduced in the recent plans. While the presentations lend themselves to comparisons with American school programs for the same age levels, they cannot serve as indicators for the total subject programs in the European schools. As explained earlier, such programs are designed for the entire school course in coordinated fashion.

In view of the necessary limits of this study, the stated aims and objectives underlying the individual subjects programs were given rather brief treatment, except in the case of social studies. Specific objectives are usually indicated in the plans, but never in "behavioral " termas (as recommended for American practice, e.g., by John Goodlad in The Changing School Curriculum*).

A further limitation of this chapter is that of dealing only with the academic subjects. Had music, art, and physical education been included, the results would have been very unbalanced: neither France nor Italy have given these fields much attention in the reform plans for the middle level. The German systems generally not only devote more school time to these fields (see charts XIII – XVI), but also appear more interested in modernizing instruction in these non-academic subjects.

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* John Goodlad, The Changing School Curriculum., A Report of the Fund for the Advancement of Education, 1966.

National Language

The guidelines for the subject of "national language" shows remarkable differences not only between the three countries but also between the Länder within Germany. The differences depend on the objectives, in each case, of instruction in the native tongue and its literature as well as on the degree of pragmatic orientation deemed desirable for the school. Traditionalism is reflected in emphases on linguistic skills in formal grammar, verse meters and perfection of style in written and oral expression; modern approaches, in turn, stress language as a living instrument for individual expression and for communication in various styles--artistic, informative, practical or entertaining. The range of readings extends from purely literary studies to factual accounts in current newspapers and periodicals.

The French system more than any other maintains the traditional approach. Its linguistic studies throughout the observation and orientation classes stress the formal structure. Exercises in oral and written expression, even dictations, are to follow mainly the models of the reading selections. The explication de texts plays as dominant a role as it has done in the past. Memorization is recommended even of some prose pieces. The texts selected for reading are literary--starting in the 6th grade with Homer and the French classics of the 17th century and continuing in the 7th and 8th grades with subsequent periods up to the early 20th century. The addition of some (translated) pieces of foreign literature is recommended. Not one reference is made to children's literature nor to contemporary writings of any sort or to the modern media of communication. The conservatism continues through the 9th grade, for which even the most recent regulations (effective September, 1966) prescribe, besides Racine, Molière, Rousseau and 19th century novelists, the literary classics of the middle ages and the 16th century.

It is remarkable that (since 1964) the program for French in *lycée* classes is required identically for the semi-academic *collèges d'enseignement général*. Since many graduates of that school terminate their general education with the 9th grade, they never have encountered in their French classes anything written during or about the present epoch. The uniform curriculum, on the other hand, offers students in larger numbers than before a thorough education in their literary heritage and in correct, precise, and cultured language, including the typical text analyses (*explications*), and frequent memorized recitations of pieces of literary writings. ("The recitation pieces may be brief, but they must be perfectly known.")[59] The emphasis is clearly on discipline and perfection in the use of language.

Contrary to the French, the Italians greatly changed the native language program for the middle level. The old *scuola media*, serving academic pupils exclusively, was entirely oriented on Latin, which started in the 1st grade of this school. One teacher always taught both, Italian and Latin, with apparently a dominant stress on the latter; the old guidelines pay much less attention to the specifications for Italian than for Latin. In addition, the combination included history and geography, and was called "*Lettere*"

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[59] France, *Horaires et Programmes de l'Enseignement du Second Degré*, 27th ed. (1965), p. 26.

(analogous to the university faculty in which most of the _scuola media_ teachers have obtained their degree). The new _scuola media_ combining all pupils has completely new guidelines for Italian with quite modern approaches to the didactics of the subject. There are no specific requirements, neither for the linguistic nor the literary elements. Grammar should not be "conceived as a set of rules" but as "an awareness of linguistic facts." Readings should be "as broad as possible" and also "related to the living experience of the pupil." "No chronological restrictions" are set for the readings; the teacher may choose from classical or modern authors, Italian or foreign (in translation). Specified recommendations are withheld "lest they assume normative character." Student interest, level, and needs, and didactical purposes should govern the reading selections. "To satisfy the eagerness for reading typical for the age group," individual reading should amply supplement the common class assignments.

Records, tape recordings, etc. are recommended to improve diction and reduce regional accents. On the other hand, the language "should not be treated as something finished once for all times, but as something in the making, daily and through centuries."[60] The linguistic studies should stress the inductive approach. This is especially recommended for the initiation to the elements of Latin, which is part of the Italian instruction in the second grade of the new _scuola media_. Contrary to the past practices (in the old _scuola media_) of first teaching the basic morphology of Latin, and from there point to similarities and differences in modern Italian, the new approach is to begin with simple Latin sentences for the "discovery" of the grammar rules and the relations with Italian in an inductive manner. Among other things, the teacher should point to the usefulness of the Latin vocabulary as a "reserve for the modern technical terminology." By all means, the teacher should avoid the subordination of Italian studies to those of Latin.

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[60] Italy, _Scuola Media Statale_, Orari e Programmi, pp. 21-25.

The new approach to the combination of Italian and Latin represents the most difficult and disputed feature of the unified scuola media. The teachers are not experienced in this method, nor widely in favor of it. As professori of academic background, they have no systematic training in teaching methods and are generally accustomed only to the traditional teaching used in the academic schools. Many of them feel uncomfortable with the great heterogeneity of pupils in the unified scuola media. To compensate for these facts, the Centro Didattico for the scuola media has been holding regular in-service courses and conferences in which the teachers become acquainted with the new approaches. In addition, new textbooks and an abundance of professional literature on the instructional techniques have been published as aids for the teachers.

In the German middle grades, the subject of the national language has neither undergone complete change as in Italy, nor has it remained in such traditional forms as in France. All Länder directives furnish elaborate guidelines for content and teaching approaches in German. In objectives and emphases these guidelines resemble in spirit and tone the outlines of the newest Italian scuola media plans. Contrary to the French, the German guidelines rarely mention terms such as "precision," "perfect," "correct," and never mention "explication" of reading texts. Instead, they emphasize "feeling for the language," "self-expression," "enjoyment of poems" or other readings, and "musische Erziehung" i.e., aesthetic-artistic education, as part of the functions of native language instruction. Compared to American practices in junior high school English courses, the German schools place more emphasis on the formal (grammar and style) and the artistic (poetic) elements, and less emphasis on the psychological insights gained from reading materials.

All Länder guidelines, for all different school types, show the following characteristics: As to the linguistic training, they stress proper diction, the ability of using non-dialect speech, and cultivation of a natural style and free expression. In grammar, the basic elements, already begun in the 4th grade, are continued in the 5th, 6th and 7th grades (parts of speech, sentence analyses, subordinate clauses, etc.). Spelling is always taught in functional context, with explanation of derivations, pre- and suffixes, etc. Usually there are explicit warnings not to use mechanical approaches in teaching spelling. ("Spelling bees," for example, would not be acceptable in German teaching.) Dictations for spelling practices must always be pieces of text that make sense, never "collections of difficult words." The conception of language as a living, functional and at times artistic means of communication is continuously stressed. Teachers are held not to destroy but to foster the children's natural fondness of speaking by limited use of criticism and abundant praise and encouragement.

On the question of reading materials, the most recent (1966) guidelines show revisions of the earlier versions. The latter (especially in Bavaria and Northrhine-Westphalia) were largely limited to fairy tales and legends, up to the 6th grade, then tales and poems of 19th century writers and stories about the rural life of the various regions of Germany. The newest plans, however, give attention to contemporary writings, including some by foreign authors (in translation), children's literature, stories on city life situations and the modern world of work. Special mention is made of including factual accounts from newspapers, periodicals, and journals for children. There is a general trend of reducing the use of readers and anthologies (still widely used in France and Italy) and of broadening the selections. Most guidelines recommend a certain minimum number of entire stories or books to be read (not only excerpts as typical for anthologies). Poems are still to be memorized--the number varies from "a few" to ten per year--not "for exercise purposes" but "for enrichment." Individual reading is highly encouraged in all plans (although school or class libraries are still "underdeveloped" in many cases).

Nowhere, not even in any guidelines for academic schools, do the programs reflect an attempt to expose children on the middle level to the literary classics or to elements of the history of literature. While French children in their 6th and 7th school year read Molière, Victor Hugo and authors of the Roman and medieval epochs, in the 8th year in addition Corneille, Voltaire, Balzac, George Sand, and stories coordinated with the studies in history, the German children on the same grade levels read pieces of 19th and 20th century authors selected more in view of child psychology and the broadening of life perspectives. (Among these authors and known by Americans are, e.g., Jack London, Mark Twain, Stevenson, Melville, S. Lagerlöf, Kipling, Schweitzer, St. Exupéry.) Only in the 8th grade, some easier ballads of Goethe and Schiller are included and sometimes Schiller's drama "Wilhelm Tell." In the upper grades of the Gymnasien, the literary classics (mainly the German dramatists and Shakespeare) are given a fuller treatment, but not to the exclusion of contemporary writings.

Among the modern features added to the most recent guidelines is the recommendation, for example, in the Bavarian Gymnasium programs, to include in the training of written expression such practical features as the writing of minutes, reports, and curricula vitae. Moreover, all German guidelines contain references to the use of radio, television, films, and tape recordings in the instructional programs, either in the form of reports, discussions, or references or as classroom features. The public media conduct school programs similar as in the U.S. The latter, by the way, is also true for Italy and, in a limited measure, for France. The French curriculum directives, however, make no mention of it; the Italian special use of television for instruction will be discussed in ~~the~~ a ~~last~~ future ~~chapter.~~ report

Foreign Languages

Foreign language studies, as was mentioned repeatedly, still play a dominant role in European secondary education. In formal respects, foreign languages represent the criteria of differentiation by class sections or school types (as in Germany), and of the admission to these sections based on the pupils' linguistic abilities. In sociological respects, the families choose foreign language programs for their children in patterns that closely correlate with the social class structure. With respect to their substance, foreign language studies are elements of complete novelty to the children entering the middle grades. All other subjects in the middle grades have been encountered on the primary school level (and be it in informal ways) or are kept within the range of familiar experiences of the children (such as science in the form of elementary observations). The novelty character contributes to the importance accorded to the language courses by teachers, and to the position of "favorite subject" that the foreign language frequently holds for able students. On the other hand, a student's foreign language achievements during the first years of secondary school are more decisive for his further school career than his work in other subjects. For German schools it has been revealed that in 95 per cent of failures during the first and second Gymnasium years (usually resulting in transfers to less academic schools), poor achievements in the foreign language accounted for the decisions.[61]

In contrast to the European situation, it is remarkable how far the American schools have moved away from emphasis on languages. Notwithstanding recent trends of renewed interest in earlier starting points, our school systems normally begin a foreign language in the 7th or the 9th grades, i.e., points at which many European children begin their second and third foreign language. And although the American foreign language courses proceed more concentratedly (in 5 weekly hours), they normally do not hold a position of essential importance in the total program as they do in Europe. These facts demonstrate the historical changes that have transformed the original secondary schools--the "grammar schools" in English terminology--into "high schools" of the typically American character.

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[61] See Helmut Schelsky, Anpassung oder Widerstand? Heidelberg: Quelle and Meyer, 1961, p. 62.

The present expansion of foreign language programs in European countries to many non-academic students is motivated by sociopolitical and practical considerations. Among these, the extension of cultural education, of intellectual horizons, and of communicative abilities to larger segments of the society are mentioned in several guidelines (Italy, Berlin, etc.). The usefulness of elementary foreign language skills for many jobs in the contemporary European moves toward closer economic cooperation is obvious. A glance on lists of employment want-ads shows the increasing demand for English, French, etc. in commercial and partly also in industrial jobs.

On the international scene, the growing importance accorded to modern foreign language instruction is evident in the fact that during the last four years four major conferences chose this topic as their major theme. One was an International Congress on Foreign Language in Primary Education, convened by the UNESCO Institute for

Education in Hamburg in 1962, the second was the Annual Conference of the European Ministers of Education in Vienna in 1964; the third was the 28th Annual Conference of the International Bureau of Education (organized jointly with UNESCO) in Geneva in 1965, which published detailed recommendations addressed to the national ministries of education; and the fourth was an International Conference on Modern Foreign Language Teaching organized by the Pädagogische Zentrum in Berlin in 1965. The papers and proceedings of this conference were published in English in two volumes totaling nearly eight hundred pages.[62] They contain interesting reports on new approaches, experiments, research, and evaluation in modern language instruction at all levels of education.

The selection and the sequence of foreign languages have considerable impact on the children's entire school programs and their future occupational careers. Traditionally, knowledge of Latin was the indispensible criterion for admission to any academic study and, concurrently, to higher social status. Today it is still a prerequisite for most of the traditional university disciplines in Europe, but the strong dominance of Latin in secondary schools has been reduced--in different countries to different degrees--by the expansion of modern language studies and the increasing awareness that the basic elements of science and social studies must find adequate room in the school programs. In Germany, the "monopoly" of Latin has been giving way since the early part of this century;

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[62] International Conference, Modern Foreign Language Teaching, Papers and reports . . . published by Pädagogische Arbeitsstelle und Pädagogisches Zentrum, Berlin, 2nd ed. 1965, available through Franz Cornelsen Verlag, Berlin and Bielefeld.

i.e., the classical Gymnasien with Latin as first language and dominant subject have decreased to a point where today only about 5 per cent of the ten-year old children (mostly boys) are enrolled by their parents in a classical Gymnasium. The great majority of Gymnasien begin with English, and many of them offer Latin as second or third language.[63] The entire curriculum in these schools is oriented more on modern subjects. In the Latin-oriented Gymnasien, on the other hand, the classical culture is stressed, Greek is usually taught from the 7th grade on, and a modern languageis added as a minor subject during two of the upper years. (See Chart VII)

In France and Italy the situation is different. Latin still plays a much greater role, for cultural and also social reasons. Both countries with their Latin-based languages and civilizations naturally feel a close affinity with the classical heritage and have continued unto the present to educate the children of the upper strata of society in the humanist tradition of a Latin-centered school curriculum. Especially the middle level--the first years of lycées in France and the scuola media in Italy--was the stage of extensive emphases on the fundamentals of Latin, at the expense of instruction in elementary science and any thorough study of a modern language. The recent reforms in both countries undertook changes in this tradition, not only in view of the need for stronger foundations in modern subjects, but also for socio-political reasons: the desired expansion of secondary schooling to wider population strata called for curriculum offerings that would appear more meaningful to families whose children would aspire to careers in business and industries.

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[63] The extent of Latin instruction in West Germany is reported in a survey published by Ständige Kultusminister-Konferenz, Zum Umfang des Lateinunterrichts, Dokumentation No. 8, Bonn, 1963.

The French authorities, therefore, introduced different sections on the middle level: the modern section with a living language (English or German) and a classical section with Latin and a living language starting almost simultaneously (Latin is begun three months later than the modern languages) (See Chart III). The latter program, seemingly quite burdensome for 11 to 13-year-old children, is chosen by many families and holds definitely the greater prestige among the public and the teachers.[64] The heavy grades (the "observation cycle") in reality acts as a catalyst favoring the children of upper socio-economic groups whose home backgrounds provide them with greater linguistic agility from the outset.[65]

The Italian reform (of 1962-63) introduced radical changes in the scuola media by removing Latin from its central position in the curriculum. While formerly Latin studies absorbed well over a third of the weekly school hours in this school, today the curriculum--a common one for all children--reflects a more balanced, modern orientation. (See Chart XI) A modern language (usually French) is started during the first year of scuola media; Latin integrated with

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[64] In the famous old lycées of Paris, the percentage of entering students enrolling in the classical sections is usually over 90 per cent, even for girls, as one of the directrices, Mme. Laubier, stated (in an interview on June 15, 1966).

[65] This was confirmed in interviews with lycée teachers and administrators in Paris in June of 1966.

Italian is begun during the second year to offer "try-out" opportunities for all; the third year provides a full course of Latin as an elective. In this manner the study of Latin, in Italy still the "entrance ticket" to higher education and privileged positions in society, is within reach of all able children, regardless of the parents' background. There is no doubt that less Latin than before is now being learned in the *scuola media*, and the *ginnasio-liceo* teachers have to adjust their language programs accordingly; but the gains are not only greater social justice but also a potential increase of able young people prepared for advanced training and occupations as an asset for society as a whole. Opposition against the diminished preeminence of Latin in the *scuola media* was and still is strong in certain influential circles. Newspapers and magazines abounded in criticism of the reform when it was introduced.[66]

The emotional support that Latin as first and central language of a school program arouses in traditionalist circles of the educated class is not confined to Italy. It is found in varying degrees also among many French and some German parents and teachers. The issue is not whether Latin should be studied, at some stage, by students aiming at higher education, but the argument is over the early start of Latin and the total room it should occupy in the school career of children. Defenders of a classics-oriented school program usually argue on the grounds of humanist values, the inspiration to be gained from the classical writings, and the training in logic it supposedly enhances. These features, of course, can hardly enter the instructional programs of the middle level, where the Latin classes are devoted to grammar and drill in simple translation. In reality, a comparison of curriculum programs for Latin reveals the following interesting fact. If Latin is started early, in grades 5 or 6 (as in many French and some German academic schools), the pupils have to spend 5 or 6 weekly school hours on it for several years, including the many hours of homework, in order to cover an amount of knowledge that can be equally well acquired in much less time if Latin is started as second or even third language, i.e., at a later point. The final requirements (e.g., in Germany, the "Grosse Latinum" in the Abitur) are identical. The explanation, of course, is the maturing of cognitive abilities that makes the learning of abstract concepts of linguistic intricacies in Latin much easier during the years of adolescence, while at a younger age vast amounts of drill must compensate for the children's less developed capacities of grasping abstract language structure. However, the repetitive drill and the "training of memory" are assumed to be valuable by the supporters of an early start in Latin; in other words, the presumed "formal discipline" of the subject is a major argument in its favor as the first language. Another argument is the assumption that knowledge of some Latin will facilitate the subsequent learning of a modern foreign language. Yet this assumption is contradicted by the modern emphases, found in all directives, on "active methods" and the inductive approach (in contrast to the traditional grammar-centered construction of sentences) in the teaching of living languages.

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[66] For example, the Sunday edition of the *Corriere della Sera* of 11-4-1962 showed a full page drawing in which protesting children were carrying signs with slogans such as "Latinum volumus" (we want Latin) etc.

In short, the insistence by certain groups on Latin as an early and central subject of the curriculum rests less on rational grounds than on speculative assumptions, if not extrinsic motivations--the high social prestige of Latin and its symbolic meaning for a humanist culture in the European tradition.

Modern language instruction, too, is affected by sociopolitical considerations. One of the trends, familiar also to Americans concerned with curriculum planning, is the attempt to broaden the range of languages taught in the schools. For the middle level, France seems to have the broadest range of offerings; its curriculum directives refer to English, German, Arabic, Spanish Italian, modern Hebrew, and Russian. But the first two are by far predominant. In Germany, English and French are the only modern languages offered at this level (except for Russian in some schools of West-Berlin), while in the upper grades of Gymnasien also Spanish, Italian, Russian, Hebrew, modern Greek, etc., may be offered as third language, as far as qualified teachers are available. Italian schools teach French and occasionally German or English on the middle level, and in upper grades English, Spanish, or German. The directives mention no other modern languages.

Another and very important innovation typical of industrialized nations today is the growing expansion of foreign language teaching to children who are not receiving an academic education, i.e., to much wider segments of the population than before. All of the conferences devoted to modern language instruction (see above) have included strong recommendations to this effect in their proceedings. The expanding horizons in job opportunities, in travel, and in communications have convinced the young people in Europe that knowledge of a foreign language is advantageous; there is no question of popular interest and motivation. There are, however, problems of implementing a vastly extended scheme of foreign language instruction, foremost the availability of teachers and equipment, and the adjustment of traditional methods of teaching to the needs and abilities of the newly included pupils. Another question is whether and on what basis to exclude the least able pupils from foreign language study.

The French and Italian systems offer a modern language to all children in the medium-level schools (the cycle d'observation of collèges and lycées, and the scuola media). But the children who do not attend these schools, i.e., who finish their compulsory education--if at all--in supplementary primary school classes, have no opportunities for foreign language studies. (The number of these children, mainly living in rural areas, is steadily decreasing, but still amounts to about 45 per cent of the age group.)

The German Länder systems have begun, during the past several years, to extend foreign language teaching also to those children who do not attend Gymnasien or Realschulen; this concerns about 70 per cent of the age group who finish their general education in the upper parts of Volksschulen, which are now being converted into diversified Hauptschulen leading up to the 9th grade. The overriding problem in Germany is the lack of qualified teachers. Not only is there a general teacher shortage, but also a shortage of elementary school teachers with a major in English or French (which is needed to qualify). In addition, there is a severe shortage of teacher training instructors for modern languages at the Pedagogical Institutes. The city-states (Berlin, Hamburg, Bremen) with a longer tradition of English teaching in the Volksschule have less staffing difficulties. Progress is made in other Länder, too, partly by using competent yet not certified persons (e.g., housewives) as teachers of English. Northrhine-Westphalia has gone farthest with this (in Germany still controversial) practice. This Land reports the following progress of English instruction in Volks- (Haupt)schulen: of the 5th grades in 1963 participated only 5.5 per cent, in 1964, 6.5 per cent, and in 1965, 70.7 per cent. This obviously includes also many rural schools.[67]

Opinions differ on the question whether to include low-achieving students in the English language programs. Usually they are excluded and given instead additional drill in German and arithmetic. The cutting-off point is usually an average grade corresponding to C-. Hamburg, however, has experimented for several years with English in special classes (now numbering 45 with a total of 650 students) for such slower students during the 5th and 6th grades.[68] The weekly hours for English were 5 during the first semester, 3 during the second in each of the years. The report states that the students responded with great interest, without exception wished to continue with English during the following grade, and attained satisfactory achievements (about 700 to 800 words for the two years). The oral approach was mainly used; no writing was begun during the first 5 months. As a major success, the teachers noted a strengthening of self-confidence in these children and a gain in positive attitude toward school learning in general. Moreover, the 5th graders were found to learn more easily by this method--which leaned heavily on direct imitation of sounds and speech patterns--than the 6th graders and especially than the older children who were repeaters.[69]

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[67] "Fremdsprachen in der Volksschule," Bildung und Erziehung, published by Internationes, Bonn, no. 3, 1966.

[68] See P.W. Kahl, "Der Hamburger Schulversuch--English für alle Volksschüler," in International Conference on Modern Foreign Language Teaching, op. cit., pp. 83-92.

For the regular language courses, the official directives of the three countries contain guidelines on general emphases, attainment goals for each school year, and suggestions for methods. The German directives are most elaborate on these questions. For all three countries, the guidelines stress the importance of speaking (over writing and grammar drill) during the early years. Proper pronunciation and intonation should be taught, according to the German guidelines, by the teacher's frequent repetition of phrases in exemplary enunciation. The Berlin guidelines (of 1965, for non-academic schools), for example, specify that the teacher should first read to the class any new text, with the books closed to get the children used to understanding the spoken passages. Unknown words or contextual meanings should then be explained, demonstrated, acted out, or drawn on the blackboard. Only after full comprehension should the children start to read the passages. (This method differs from traditional approaches which required the students to prepare on their own a new lesson in the textbook, thereby neglecting the practice of oral understanding.) The "direct method" approach is prescribed in both the German and Italian systems: this means that as far as possible only the foreign language is used, also in explanations. The French system, instead, recommends the "active method" for the learning of grammar, which means an inductive approach but not an avoidance of the native language.

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[69] Of interest, at this point, would be a discussion of the (small) number of experiments, in France and Germany, with foreign language teaching on the primary level, but since it does not concern the middle level it is not included here. Several accounts on this topic are found in the Papers and Reports of the above-mentioned International Conference.

As means of enlivening the instruction, songs and poems are mentioned, and also little scenes to be played in class, that foreign visitors be invited to speak to the classes, etc.

The study of grammar, supplementing the "direct approach," is given detailed attention in the German and French guidelines. The Italian guidelines make only broad references to grammar, stating mainly that its rules should be taught following (not preceding) the acquisition of speech patterns, and that translation exercises should be used only as auxiliary practices.

The standards of expected achievements in the English courses at German Gymnasien can be estimated, to a certain extent, from the number of words included in the guidelines as goals of attainment. Northrhine-Westphalia (plans of 1963) sets the number of 2500 English words for the first two years (5th and 6th grade), Hesse (plans of 1957, still in effect) mentions 2500 words as a goal for the first three years (5th-7th grade).

For the non-academic and semi-academic schools in these

Länder, no figures are indicated. Their requirements, of course, are not as high. The Italian guidelines do not mention figures. The French directives set the maximum number of new words and idioms at 600-700 for each of the 6th, 7th and 8th school year--which is a reduction from the goal of 800 words established in earlier directives for academic schools. The accompanying instruction states: "Much more importance must always be accorded the spontaneity and correctness of oral and written expression than the quantity of words and idioms taught."[70]

The French directives--since the unification of curriculum for the middle level--make no differences in program requirements for the academic and the semi-academic branches. But special directives for the latter--the collèges d'enseignement general--explicitly refer to differences in approach: "Rather than considering the language instruction as an ornament of the mind, the teaching must provide a working instrument which may later serve in a chosen career."[71] In other words, the practical usage is emphasized. How this objective can be combined with the program requirements specified identically with those for the academic classes is not easy to perceive.

The modernization of instruction with the aid of audio-visual machines is making headway to different degrees in the countries under study. The program directives do not accurately reflect the advances made. The Italian guidelines only cursorily recommend the use of such aids; the French do not mention them in the plans for academic classes. But the last-mentioned instructions for the semi-academic collèges d'enseignement general recommend the equipment of special rooms for language teaching, including phonographs and tape-recorders. The clear warning is added that only judicious use by teachers trained in the latest advances in this area is indicated. To avoid errors and a "victimization of pupils," the teachers must consult with the regional centers of pedagogical information before purchasing any audio-visual equipment.[72] The German directives reflect a less guarded approach to the matter. They fully recommend the use of records, films, and tape recordings as far as available. (The tradition of audio-visual methods in German urban schools dates back to the 1920's). Language laboratories have been installed in a number of schools. A good deal of experimentation in language instruction goes on in these countries, including programmed instruction and televised courses. This came to light in all of the international conferences on modern foreign language teaching mentioned above. Their papers and proceedings report on novel approaches, research, and evaluation in language teaching at all levels of education.

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[70] Horaires et Programmes, op. cit., p. 82.

[71] Les Collèges d'Enseignement General, Instructions-Horaires-Programmes, Paris, 1961, pp. 25-26.

Among the ancient languages, only Latin will be here discussed, since Greek studies are begun on the middle level only in the limited number of the strictly classical section in the academic schools of France and Germany, i.e., in the 8th grade in

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[72] Ibid., p. 37.

France and the 7th grade in Germany. There seem to be few curriculum changes for Latin instruction in France and Germany, in contrast to Italy with its drastic changes for Latin in the scuola media. Only some noteworthy features of the guidelines[73] need here be mentioned. The greatest and much disputed novelty, established for the second year of scuola media, is the integration of Latin with Italian teaching in a purely inductive, not grammar-oriented approach. No training or previous experience of this kind can help the teachers in their experimenting; they are left greatest freedom of initiative, but have the aid of newly written textbooks and also opportunities for in-service conferences on this topic.

For the third year of scuola media (8th grade) the official recommendations include the reading of continuous prose with Italian translations at hand. This is intended to enliven the instruction which is necessarily heavy in grammar and piece-meal translations. French and German directives call for the reading of extended prose (in both cases, Caesar's Gallic Wars) not before the third year of Latin instruction. All three systems recommend the inductive approach at least in alternation with the traditional one. Great differences exist in the required amount of vocabulary mastery. The highest is mentioned as 2500 for the first three years of Latin in Northrhine-Westphalia (less in other German Länder), while France requires about 1000 for the same time-span. The Italian guidelines do not mention this point. Memorization of verses and prose pieces are recommended in some of the German and especially in the French directives. All guidelines emphasize the importance of linguistic insights gained from Latin and of the acquaintance with the classical civilization. It remains an open question to what extent these objectives can be achieved during the middle grades, i.e., with 11, 12 and 13-year-old children who are learning Latin as first foreign language.

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[73] For France, detailed guidelines on methods and approach, in addition to the briefer program directives have been published by the Ministère de l'Education Nationale, Francais, Latin, Grec, Horaires, Instructions, Programmes, Paris, Institut Pédagogique National, 1965.

The cultural dimensions of modern foreign language courses depend largely on the officially stated objectives. In all three countries, the students are to learn about the contemporary life of the people whose language they study. More thorough acquaintance with the country's civilization is reserved for the school years beyond the middle level. In the context of English courses the attention given to the U.S. (not mentioned in the Italian directives) is of interest. The French directives make one reference to America: the 8th grade reading should be selected from "short stories and narratives of modern and contemporary English and American authors."[74] (Later readings are all from English writers of the past four centuries.) The present German directives --in contrast to those of pre-war years--give equal attention to American as to English civilization and literature. Readings on the 8th and 9th grade level include, e.g. (for Hesse *Gymnasien*), Jane Addams, and Helen Keller. In recent years the acquaintance of students with the life in the countries whose languages are learned has been greatly advanced by the increasing exchanges of teachers and students and expanded foreign traveling by families, individual young people and entire school classes.

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[74] *Horaires et Programmes*, *op*. *cit*., p. 84.

Social Studies

The social studies--including history, geography and civics--have undergone significant curricular changes which are evident in the numerous governmental directives dealing with these subjects. Aside from an updating of the programs in history and geography, the most significant developments occurred in the field of civic education.[70] In France, detailed instructions for the modernization of the social studies were issued in 1954, '55, '57, '63, and special guidelines on civic education in 1961.[71]

Italy, less prolific in revisions of history and geography programs, introduced (in 1958), as a new feature, the teaching of civics integrated with history on the middle school level. The political significance of this innovation is reflected in the fact that it was decreed by the president of the republic.[72] A special characteristic of the Italian civics program is its uniform design for the different school types in advance of the unification of the scuola media. The motive explicitly stated was that this subject "ignores differences of class, of census, of career, of studies" (ibid., p. 16).

The German situation, in contrast, was and is more involved. Civic education gained much attention during the reconstruction years following World War II.[73] The different Länder handled the subject differently: either as a separate course or integrated with history. In view of its national importance, the ministers of education issued as one of their first common resolutions (in 1950) a set of principles guiding the political education in the schools.[74] This was followed, in 1953, by a resolution that set forth detailed programs for the history courses in the three types of school (Volksschule, Realschule, Gymnasium). These ministerial history programs clearly reflect a fact of reality that was soon to arouse the indignation of many Germans and non-Germans: that in most Länder hardly any attention was paid to the most recent history of Germany under National-Socialism. (The only reference, in the Resolution, to the era between 1930 and 1945 was the word "the dictatorships.") To rectify this situation, which in 1959 caused headlines and heated debates in the Federal legislature, the ministers of education issued a resolution that outlined a number of measures to make sure of the teaching of Germany's most recent past.[75] Still more specific on the topic of totalitarian regimes (Nazism and Bolshevism) was a subsequent resolution in 1962,[76] accompanied by guidelines for writing of textbooks for the teaching of the most recent historical era.[77]

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[70] For a comprehensive survey of European developments in this field, see Civics and European Education at the Primary and Secondary Level, published by Council for Cultural Cooperation of the Council of Europe, Strasbourg, 1963.

[71] See Ministère de l'Education Nationale, Instruction Civique, Lycées, Ecoles Normales et Classes d'Observation, Paris, 1963.

[72] "Decreto del presidente della repubblica," 13 giugno, 1958. Programmi per l'insegnamento della educazione civica in: Piano di Studi per la Scuola Media Inferiore, published Pirola, Milano, 1960.

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[73] See Susan Shafer, Postwar American Influence on the West German Volksschule (Dissertation, University of Michigan, Ann Arbor, 1964).

[74] "Grundsätze zur politischen Bildung," Beschluss der Kultusminister--Konferenz vom 15 Juni, 1950.

[75] "Behandlung der jüngsten Vergangenheit im Geschichts- und gemeinschaftskundlichen Unterricht in den Schulen," Beschluss der Kultusminister-Konferenz vom 11/12 Feb., 1960.

[76] Richtlinien für die Behandlung des Totalitarismus im Unterricht," Beschluss der Kultusminister-Konferenz vom 5 Juli, 1962.

Turning to Italy, the question is, what actions the Italian authorities have taken on the issue of teaching the young generation about the twenty-three years of Fascism in Italy. The answer is, "nothing." The ministerial guidelines for history programs on all school levels contain no single reference to the existence of the fascist past, nor to the name of Mussolini. The topics covering the era of 1915-1945 are simply mentioned as "the World Wars, the resistance, the liberation fight, the constitution of the Italian Republic." Neither is there any reference to fascism, dictatorship, or the like found in the several pages of guidelines and programs for civic education (issued in 1958).[78] Different from the German situation, there seems to have been no public or political indignation with this policy of ignoring a national era of disgrace.

The general trends of modernizing the teaching of history show some definite resemblances in the three countries. The French "Instructions" of 1954 succinctly list three main features that characterize the modern approach: a "broadening in time," a "broadening in space," and a "broadening in the conception of history." The time extension refers to the inclusion of the contemporary era--which for France (in 1954) still meant up to 1939 only. (The issue of the most recent epoch in history teaching, while certainly of greatest interest, does not concern the school level analyzed in this report and will therefore not be discussed further.) The "space" extension should include an attention to the history of non-European cultures. Again, on the 6th-8th grade level, this extension does not yet appear. (Even on the highest school levels, it is hardly developed in the three countries; only the formation of the United States is a standard topic of the 18th century epoch as taught in France, Germany and Italy, but on higher grade levels than those here discussed.)

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[77] "Empfehlung zur Gestaltung der Lehrbücher für den Unterricht in neuester Geschichte und Zeitgeschichte," Beschluss der Kultusminister-Konferenz vom 5 Juli, 1962.

[78] Oral information given in interviews with educators at the Centro Didattico for the Scuola Media (in June, 1966) confirmed the absence of teaching about the fascist era in Italy.

The "broadening of conceptions" in history teaching does concern the new approaches in the middle grades. It is, in the terms of the French guidelines, the added study of "economic and social facts, the description of civilizations and cultures, and of the technical developments." The Italian guidelines go further in mentioning "forms of work," "activities of production," "commerce, transportation, communication . . . scientific activities, education, and religious, moral, and civic concepts, social relations, and the distribution of powers in the state." No small order for 11 to 14 year-old students. The German guidelines (issued by the ministers of education) also stress that "besides the political, economic, and social developments also the cultural and intellectual aspects should be given proper treatment."

How closely in reality the teachers live up to these principles is likely to be a matter of individual differences. If textbooks are considered an indication on this point, it can be reported that several text samples inspected in the three countries (for the middle grades) did include these new emphases.[79]

A common feature typical of the modern approach in history courses is the complete absence of references to "patriotism," national pride, the "glorious" past, triumphs in war, etc. In the past a notorious instrument of fostering ardent nationalism, the study of history in present times, according to all guidelines and directives, has the scope of tracing the evolution of man's civilization with a focus on the most familiar society: one's own nation. The Italian guidelines, e.g., in their first sentence, speak of "the aspects characteristic of the life of the various people and their contributions to the growth of civilization, understood as the common heritage of mankind." The French program outlines for the ancient Eastern Mediterranean, the Greek and the Roman civilizations, e.g., have added (since 1962) in each case the topic of "what we owe to this civilization." And the official guidelines, in the 1956 supplement, admonish (in special italics print): "not to concentrate in exaggerated fashion on the history of France . . . to accord as much room as possible to the facts of (general) civilization."

Similarly, the German guidelines call for a broadening of perspectives from German to European to world-historical dimensions. The "General Principles" of the Hessian school plans (of 1956) discuss in several paragraphs the changed concepts in German history. "Historic education, for Germans, cannot be guided by a commonly taught and fanatically believed national history myth. It has to strive for a calm and balanced consideration of the various historical forces . . . of the situation and tasks of the German people in relation to the other peoples and . . . the basic tendencies of the history of mankind." Among the events of "fundamental importance, which changed the face of the earth, and must therefore be understood," are mentioned "the American independence struggle, the French Revolution, the Bolshevic Revolution, the rise of the colonial peoples." Repeatedly, the terms "sober and objective views" of events are used in discussing the tasks of proper history instruction.

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[79] European activities in textbook reform are discussed at the end of this chapter.

The similarity of important modern features introduced in the three countries' history instruction does, however, not extend to the general role that history is assigned in the school programs of these nations. The theoretical ideas that in the various directives introduce the programs and the guidelines on practices reflect quite different accents in France, West Germany and Italy. Briefly speaking, the German accent is on political education, the Italian accent on socialization, the French accent on humanist orientation.

To begin with the last mentioned, the French official "Instructions" (issued in 1954 and 1956) for the teaching of history are intended to articulate "the role that must fall to history in the acquisition of a humanist culture, adapted to the concerns and needs of our epoch" (op. cit., p. 31). In particular history must serve "to clarify the reflections on human life and social relations, on political and economic aspects, and to provide the mind with an arsenal of definitions which are indispensable to whoever wants to think clearly" about issues of human relations and their roots in the past (op. cit., pp. 38-39). Finally, history should "procure that sense of the continuity of human development of the solidarity of generations" that should elicit in the young a strong orientation "toward service for the common good."

The Italian emphases on the economic and cultural activities of different peoples, on the power structures in the states, etc. reflect the primarily social orientation of history teaching in the scuola media. This comes to light quite clearly in the various recommendations and in-service training materials issued by the Centro Didattico for this school. For example, the "Concluding Declaration" of a "National Aggiornamento Course on the Didactics of History" (in October, 1965) states as objective:

> the historical consciousness that should assist the pupil in a better adjustment to society and in an acquisition of the norms of life. To this end the following activities are combined: 1) the "historical work," i.e., intellectual exercises of the pupils in historical research; 2) the life of the class as a social group organized in sub-groups; 3) the study of the environment.[80]

In the German school systems, history is grouped together with civics, geography and (in the 12th-13th school year) social science--in the category "political education." Its essential objectives are the study of political organization of societies, the recognition of political rights and responsibilities of individuals and groups. After much experimentation with various approaches, e.g., stress of cultural history of civilizations

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[80] "Dichiarazione Conclusiva, Corso Nazionale di Aggiornamento sulla Didattica dalla Storia," in La Scuola Media e i Suoi Problemi, no. 14/XII, May/June, 1966.

(similar to the French pattern) during the first post-war years, the primary importance of training in political judgment has been generally accepted today.[81] This consideration has also led to the insistence--legislated in all *Länder* today--that no school must permit students to graduate without having learned the most recent political history of Germany, difficult as its teaching may be. (In Italy and France, this practice is not followed for the reason that there has not yet developed an authoritative scientific clarification, i.e., detached scholarly research, on the course of recent events.) The political emphasis does not, however, exclude broad attention to cultural and technical achievements, as was mentioned earlier in this section.

The overall history programs of the three countries differ foremost on the point of a cyclical treatment (meaning repetition) of the historical epochs. Formerly, this system was standard procedure in European schools. But in recent years, after the lengthening of compulsory schooling, both France and Germany abandoned a complete cyclical approach. (In France, a repetition exists only for 10th and 11th grade academic students, who repeat more thoroughly the 19th century (1789-1870), which is treated more cursorily in the 9th grade to lead school leavers toward more recent times in history. In Germany, only the 12th and 13th grades, in their "social science" course, review certain epochs and events in their topic-oriented study of social history.) The Italian scuola media, terminal education for many students, offers a three-year course from pre-history to modern times. Liceo students subsequently spend five years repeating more thoroughly the entire history. (The first of these years up to the end of Greek antiquity, the second year on the Roman era, the third year on the middle ages, and so forth. The emphasis is obviously on ancient times, in accordance with the strongly humanistic orientation of this school.)

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[81] A good review of these developments and the present direction of programs and practices is contained in one of the last publications of the German Committee on Education: "Der Lehrgang Politische Weltkunde," *Empfehlungen zur Neuordnung der Höheren Schule*. Empfehlungen und Gutachten, no. 9 by Deutscher Ausschuss für das Erziehungs-und Bildungswesen,, Stuttgart: Klett, 1965.

To American readers, it may be pointed out that in these countries all schools assign at most two hours per week to history not four or five as customary in America.

Within these overall history curricula, the structure of the programs for each of the middle grades (6-8) varies considerably in the three countries. The German guidelines refer more to psychological considerations (of child development) than the French and the Italian directives in their introductions to the course plans. The German schools, consequently, proceed more slowly in the beginnings of history introduction. Their 6th year courses, in fact, offer no systematic study of historical events, but instead lay the groundwork for an understanding of concepts (concerning forms of social organization, human activities, etc.), a sense of historical time, and an interest in the colorful past. This is done by narratives ("Columbus discovers America"), visits to historical relics of the environment, and attention to the effects that history has had on the children's own families. The 7th and 8th grades proceed in chronological order arranged according to the years available in each of the three school types:

3 in the Volksschule, 4 in the Realschule, 5 in the Gymnasium (the latter finishes the chronological history with grade 11, following it up with social science in grades 12 and 13).

The Italian arrangement has been mentioned above. In the 6th grade (first of scuola media) the history course extends from antiquity to the beginning of the middle age, the 7th proceeds to Napoleon, the 8th to "our days." French children of the 6th grade in all schools study pre-history, the Eastern Mediterranean civilizations, and ancient Greece. The course is introduced by the following topics: "Definition and usefulness of history. General notions of chronology. The generations, the centuries; the eras, the great periods. Prehistory and history."[82] Typical for the French system of providing "clarity" of definition and logical approach at the basis of instruction!

Similar in the three countries' curricular discussions for history is the concern over excessive content coverage and details. Explicit warnings are expressed to abstain from "the danger of encyclopedism." All directives recommend to treat the chronological series of topics listed in the programs as general guideposts and to select for more concentrated study such epochs, events, or achievements that elucidate certain principles or trends. Other criteria for more thorough treatment may also be local connections with historical events or even particular student interest in a historical period or personality. The freedom of selection rests with the individual teacher;[83] the degree of detail in recommendations varies; it is greatest in the German Länder guidelines, and least in the Italian directives. Both the French and the German documents request that the teacher present a summary account of events between two highlighted epochs in order to assure chronological continuity. Except for the highest school grades in France and Germany, where a topical order in contemporary history prevails, historical continuity is generally emphasized.

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[82] France, Horaires et Programmes . . . , p. 54.

Much attention is paid in the French and Italian guidelines to modern methods of history instruction. The French directives are the most elaborate in proposing certain practices (which to an American educator would seem the usual features of a training course in "methods.") In essence, the French teachers are told to use the "active method," as it is stressed in all recent directives, because apparently the teaching still widely consists of lecturing and recitations. To enliven the instruction, much use should be made of confrontation with concrete testimonies of the past: documents, pictures, artifacts, architecture, etc. No dearth of these resources in Italy, France and Germany!

Notwithstanding these proposals, the French and German guidelines acknowledge that, on the middle school level, the backbone of history instruction still is the teacher's oral presentation of the new material. His clear, colorful, and inspiring presentation will bring to life the "dead" facts of past times. Textbook reading should be used only to reinforce, fill in, and illustrate the materials to be learned, not as in America to provide the new presentations. In the view of the European educators, it is the live word of the teacher that can best express for his students the drama, the pathos, and the insights of history. The Italian recommendations on method, on the other hand, emphasize the inductive approach, the "discovery" of facts by the pupils as far as possible, in line with all other teaching emphases in the *scuola media*.

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[83] This responsibility is characterized in a current German slogan as "Mut zur Lücke"; that is teacher jargon meaning "courage to omit."

One major aspect of modern history teaching is that of integrating it with civics and/or geography. As was mentioned, all three countries have introduced civics, but handle it in different ways. In the *scuola media*, it is integrated, as is geography, in the weekly schedule of four hours for the combination. Its program and objectives are stated in general terms: for the first two years the focus is on features of society, such as family, work, rights and duties of individuals, public services, other social institutions, hygiene education, and traffic education. The last year is devoted to thorough study of the constitution, other aspects of the state, and forms of international cooperation. How much time precisely the teacher devotes to civic education is left to his discretion, also the manner in which it is actually "integrated" with history. France allots to civics in grades 6-9 each one-half hour weekly, which may be arranged as one hour every two weeks. Among these, one-half hour per month must be devoted to traffic education (a relatively new feature now introduced in several European countries). The French civics curriculum is more structured than the Italian; in 6th grade it covers "the community" (administration, services, comparison of rural and urban communities), in 7th grade: "the Department," i.e., one of the 88 districts into which France is divided (the institutions of government, education, justice, finance, traffic, postal service and agricultural services). In 8th grade: the economic and social organization (food provisions, power and water services, railroads, social services, etc.).

In Germany, the provisions for civic education vary. All Länder include it as a separate subject in the upper part of the Volksschule (the Hauptschule) and the Realschule, thus continuing the practices--dating back to the Weimar Republic era--of "Staatsbürgerkunde." The Gymnasien everywhere treat the subject thoroughly during the Oberstufe years (grades 11-13), as mentioned earlier. On the middle level (grades 6-8), some Länder, e.g., Bavaria, Northrhine-Westphalia, do not assign it a special course in the Gymnasium curriculum but integrate "Sozialkunde" with other subjects. Most Länder, however, do provide a special course for civics, usually from the 7th or 8th grade on. The Gymnasium programs in Hesse, for example, used to include one hour a week for civics from the 5th grade on; then (in 1961-62), the pattern was changed to two weekly hours from the 8th grade on.

The emphases in the Länder again differ to some extent. In most Länder, especially those with Social-Democratic influence, civic courses begin, in the earlier grades, with socio-economic aspects (life in rural and urban areas, forms of work and trade, communication, public services, etc.), then lead to political rights and duties of citizens, the structure of government on the several levels, and the judicial and tax systems. Some Länder emphasize political education more than social education, but all include the aspects and instruments of international cooperation (the U.N., the European organizations, etc.). All guidelines stress that it is important to practice political behavior and skills in the classroom and the total school life, foremost through forms of student government.

In the three countries under study as well as in other West European systems, the actual teaching of civics and its effects on the pupils seem, in general, to lag considerably behind the officially stated objectives and plans. This impression is conveyed by the survey of the European Council for Cultural Cooperation (Civics and European Education, op. cit.) and by the numerous discussions of the topic in the recent European professional literature. Major reasons of the obvious difficulties in civic education are not only the teachers' insufficient competence (lack of training and experience in the field) but also the problems inherent in teaching a subject that aims at forming behavior and attitudes as much as it aims at imparting knowledge and understanding. The former aims are intangible; they hardly lend themselves to direct teaching or to meaningful evaluation. Moreover, the out-of-school influences are notoriously strong in shaping social and political attitudes. (All these problems are well-known also to American educators.) The provision of suitable textbooks does not seem any more to be a major problem. Among the French, German, and Italian textbooks of civics for use in the middle grades, published in recent years, some are excellent, while some are rather uninspiring.

An international effort of strengthening civic education is the "European Civics Campaign" which was started in 1962 by the European Cultural Center in Geneva, and is sponsored by the Council for Cultural Cooperation in Strasbourg (a part of the Council of Europe). This campaign,[84] which has the support of the national governments and several major European teachers' organizations, comprises the following activities: conferences of the steering committee, regional training courses in specific aspects of civic teaching, and such publications as a guide for teachers of civics, handbooks on methodology containing model lessons, and a bibliography of works on European affairs for use in civic education.

The third field in the social studies, geography, in comparison to civics seems less problematic. An established subject in European schools since the 18th century, school geography today requires adjustments to modern exigencies as all other subjects do. In the three countries under study, the recent reforms included an up-dating of emphases and programs of study in geography. France, in particular, revised the geography directives for the middle grades in 1964; one result is new textbooks in geography, which are the most modern and most beautifully executed of all French textbooks.

Common elements in the three countries are found, to a high degree, in the main objectives of geography teaching: an understanding of human living in relation to the physical conditions of the environment, diminished emphases on physical geography, and the correlation of geography with history and civics. To a lesser degree, the countries' programs resemble each other in approach, progression of content, and dimension of coverage. All recent directives stress the learning of concepts as more important than an extensive accumulation of facts and names.

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[84] For a description of the campaign, see Civics and European Education, op. cit., pp. 55-58.

The German guidelines explicitly call for limitation of content by the use of "exemplary" cases or models to facilitate the learning of concepts. They also call attention to the frequent opportunities of connecting the instruction with the students' geographic background from viewing television and hearing or reading about other lands. The French and Italian directives recommend the "active method" (as for other subjects), meaning that the pupils should inductively proceed to approach new materials through their own observation of data and visual aids and then hypothesize in analogy with cases studied earlier. Students' activities, i.e., drawing, charting, map reading, data-collecting, and note-taking, are emphasized in all three countries. The social value of geography study and the development of international understanding are given importance in the Italian[85] and several German guidelines.

Aside from ample use of maps, globes, pictures, films, statistical data, travel reports, etc., direct observations of the environment by means of excursions are recommended in all directives. Again, the latter reflect national differences in focus similar to those found in the history guidelines. The Italian didactics (for the scuola media, not the liceo) focus on the pupil as learner, i.e., on psychological considerations; the French, in comparison, pay more attention to the problem of adapting the subject to the level of the students; in order to indicate the recommended degree of depth or detail,[86] they include practical examples of questions or aspects to be dealt with.

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[85] For Italy, see especially the conclusions of recent "Corso nazionale di aggiornamento" on the teaching of geography in "Didattica della Geografia," La Scuola Media e i Suoi Problemi, op. cit., No. 13 (March-April, 1966).

The school hours devoted to geography differ in the three countries. In Italy, the scuola media devotes four weekly hours to history, civics, and geography combined, which probably means an average of 1-1/2 hours for geography. France assigns 1 weekly hour for geography in the middle grades. The German Länder all have two hours for the field in all school types. But in Italy, the three middle grades have to cover the entire program of geography instruction, since many students proceed no further in their general education. Those who continue in ginnasio-liceo have geography only in the 9th and 10th grades; it is not taught in the higher classes. (In France and Germany, geography is taught throughout the school years, except the last where special integrated programs prevail.)

The programs of content assiged to each grade differ accordingly. The scuola media deals with Italy (starting with the home region) in the first year, with Europe in the second year ("countries of major importance, especially in relation to Italy"), and with the rest of the world in the third year, when some elements of astronomical geography are also included.

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[86] See Ministère de l'Education Nationale, Histoire et Geographie, op. cit., pp. 43-54.

Germany, too, begins with the home region (grade 5). The Volksschule (or Hauptschule) then takes up Central Europe including Germany in grade 6, the rest of Europe and the Western hemisphere in grade 7, and the Eastern hemisphere beyond Europe in grade 8. The Gymnasium plans follow a similar area approach, but in slower progression since more years are available. The programs in Hesse, for example, give more time to non-European continents: grade 6 studies Europe; grade 7, Africa; grade 8, Asia-Australia; grade 9, America; grade 10, Germany. Each grade integrates general physical geography with the areas studied (landforms, climates, geo-political elements) and has assigned a portion of elementary astronomy (solar system, time, dateline, etc.).

The French curriculum proceeds quite differently. The most striking feature of the ministerial syllabus for geography is the detailed assignment of a particular topic for each of the class hours per year in grades 6 and 7. (For the higher grades the topics are indicated in more general terms as they are e.g. in Germany.) No other subject is treated any longer in this way which seems like a relic of the past French practices--well known also outside the world of education--of highly centralized, rigidly prescribed school programs. In this case, the old procedure may have been followed (although this is not indicated in the document) in order to make sure that all of the broad content will be covered as planned in the limited time available: only one hour a week, or half of what the German and other school systems allot to geography.

The sequence of topics--as revised in 1964--shows another difference to prevalent European practices: broadly speaking, it starts from the distant and ends with the familiar, i.e., France.

Grade 6 has a two-part program. Of the 33 lessons, 21 are given to "general geography," 12 lessons to "Africa."[87] Grade 7 includes "The Poles, America, Asia, Oceania," again in 33 prescribed lessons, of which 7 deal with North America (3 of these with the United States), 8 with Latin America, 14 with Asia, 2 with Australia and Oceania. Grade 8 is assigned "Europe (minus France) and Soviet Asia"; grade 9, "France and French-speaking Africa."

The sub-topics for the various regions always include the physical geography of the area discussed. As a whole, it appears that the French schools stress physical geography--in a broad sense --more than it seems to be stressed in the German and Italian guidelines, where human geography seems to be more emphasized. As in other subjects, the French directives for geography place greater value on accurate "definitions" and the individual notebooks of students, where the materials studied should be carefully recorded, with illustrations in the form of sketches, graphs, pictures, and data.

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[87] To illustrate the detailed distribution, this is the sequence of topics: "The earth in space"--3 lessons, each precisely outlined by 3 or 4 sub-topics covering the solar system, time counting, light, heat, seasons; "continents and oceans"--2 lessons, with sub-topics as above; "climates"--5 lessons, etc.; "the earth's surface formation"--6 lessons, etc.; "elements of human geography"-- 5 lessons, etc. The 12 lessons on Africa, too, are precisely outlined.

In closing this survey of developments in social studies curricula, brief reference should be included to the international cooperation in textbook improvements. Valuable efforts in the evaluation of social studies textbooks, as to their accuracy in general and fairness toward foreign nations in particular, have begun in the late 1940's. In the course of time, these efforts have led to numerous international meetings and agreements on this subject. French and German history teachers have developed particular initiative in this direction. In 1951, the International Textbook Institute, under the direction of Professor Georg Eckert, was established at Braunschweig, Germany, as a non-governmental institution financed by a number of professional organizations and public bodies. It is sponsoring research, international conferences, and agreements on exchange and evaluation of textbooks. Although the institute operates without official authority, its influence is that of a moral force which induces teachers to write textbooks and to select textbooks that are objective and will serve the case of international peace.

For further information, see Kent Pillsbury, "International Cooperation in Textbook Evaluation: The Braunschweig Institute," *Comparative Education Review*, Vol. X, No. 1 (February, 1966); and Carl August Schröder, *Die Schulbuchverbesserung durch Internationale Geistige Zusammenarbeit*, Braunschweig, G. Westermann, 1961, a thorough scholarly study of 214 pp. obtainable in the U.S. through John Wiley, publisher.

Mathematics

School mathematics is a field in which extensive curriculum revisions have been introduced in American middle grades during the past decade. In the European school systems under study, the official guidelines reflect considerable resemblance in the overall objectives (precision of thought, development of concepts, etc.) as well as in the general recommendations for methods (leading from the concrete to the abstract, from the individual example to the recognition of laws). The programs and emphases in the three countries, however, show considerable differences.

Of particular interest is the treatment given to the "new mathematics," mainly the operation with sets, vectors, non-decimal systems, and the use of linguistic-logical formulation of mathematical facts. The French directives (of 1965) refer to the "new mathematics" only in quotation marks and speak of "the promoters of the 'new mathematics'" as apparently meaning people other than the authors of the directives.[88] The French directives introduce the non-traditional elements (vectors, "les notions modernes," the vocabulary of symbolism) not before the 10th grade. The Italian _scuola media_ guidelines recommend some reference to non-decimal systems when first dealing with decimal fractions. The other modern elements are not mentioned, but the value of concept formation (in contrast to mere laborious number manipulations) is repeated several times.

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[88] _Horaires et Programmes . . ._, _op. cit._, p. 112. This highly cautious approach to modern mathematics surprises even more when one notices the importance accorded to mathematics in general as apparent from the extent of detailed discussion of programs and topics in the ministerial directives for secondary education: 60 pages (of the total of 330 in the official syllabus) are devoted to mathematics, which is surpassed only by the natural sciences and the social studies, both of which are given elaborate discussions in special brochures. All the other subjects are treated in much briefer directives.

The German directives for Gymnasien, as revised during the early 1960's, introduce the new elements as early as the fifth grade (e.g., sets, non-decimal systems, estimates of results, use of letters in explaining numerical relations and concepts). Vectors are introduced in grade 8. The general objectives--as stated for example in the Bavarian guidelines of 1964--speak of a "new orientation" of mathematical instruction in view of the changed nature of mathematical science and its new concepts and structural principles. In contrast to the Gymnasien, the Volksschulen (Hauptschulen) are not at all included in these new approaches. They, too, have obtained up-dated curricula, but instruction is directed toward applied mathematics, such as: figuring of percentages, interests, insurance tariffs, prices, averages, statistical data. For all school types, the guidelines stress the value of verbal formulations of the problems at hand, of advance-estimates and of post-solution checks.

National differences also prevail in the schedule arrangements. France and Italy assign three weekly hours to mathematics in the plans for grades 6, 7, and 8, while Germany has generally four weekly hours in all school types. As a special feature of the French "observation cycle" (grades 6 and 7), the three weekly hours are divided into two hours of regular course work and one hour of "travaux pratiques" (practical work), where classes with more than 24 students--which is the normal case--are subdivided into two groups for individualized work, additional explanations, and drill;

practical work also includes the use of measuring instruments, mathematical drawing, etc.

The distribution of content programs shows the following patterns: France, grade 6--elementary geometry, including angles, polygones, circles, spheres. Solid bodies, surface and volume. Weight measures, specific weights. Even motion, acceleration. Percentages, simple interest. The practical work should also deal with simple exercises in the field of astronomy, i.e., earth and sun, moon phases, and seasons. Grade 7--Basic arithmetic, whole numbers, 2nd, 3rd and nth power, factoring, fractions (simple and decimal) in simple operations, introduction of algebraic numbers. Geometry (all types of angles and triangles, circles). Grade 8--Arithmetic, smallest common denominator, largest common devisor. Algebra, up to polynomes, relative numbers, equations (first degree), coordinates, x^{-1} and x^{o}, notion of variables and functions. Plane geometry continued. Grade 9 then leads to square roots and operations with functions; basic elements of spheric geometry.

For a proper estimate of these programs it must be pointed out that the mathematics curriculum is designed for the collège (semi-academic) and lycée (fully academic) and college d'enseignement secondaire (comprehensive) classes. For the roughly 50 per cent of French children who are not yet enrolled in these classes but terminate their education in the "fin d'études" classes of primary schools (the prevalent pattern in rural areas), no specific curriculum has been designed. The latest program directives, published in 1947 for these classes, are largely identical with those of 1938, as stated in the latest edition of Programmes et instruction commentés, Enseignement élémentaire.[89] There is also expressed a note of regret about this fact: "En ce qui concerne la classe de fin d'études, on peut regretter l'absence d'instructions officielles précises et pratiques."[90] The commentary then advises the teachers to follow the guidelines of 1938, which for the "fin d'études" classes (two final years beyond the 5 elementary grades), offer no new content to be learned in mathematics. Instead, the materials presented in the 5th elementary school year should be repeated so that the "mechanics of arithmetic be completely acquired and firmly secured" (ibid., p. 233). Moreover, these mechanics should be practiced by application to the "realities of daily life" and especially "in connection with other subjects such as science, geography, civics (budget of the community, taxes, . . .)." This approach (in theory) bears strong resemblance to the American core curriculum or "project method," except that the French guidelines seem to stress (more than would be found in American guidelines) precision of work, repetitions, and oral exercises, i.e., drill in basic skills without the use of paper and pencil.

The Italian guidelines for mathematics are much briefer than those of the other two countries. (This is true for all subjects.) In the introductory comments, which are modern in their approach, attention is called to a close coordination of mathematics with the related field of "Observation and elements of natural science." The plans count on one teacher covering both subjects, but doubts have been voiced as to the success of such integration, since secondary school teachers are merely prepared in one field.[91]

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[89] Published by M. Lebettre and L. Vernay, Paris, Librairie A. Clins, 1965, p. 219.

[90] Ibid., p. 233.

The programs assigned to the three grades of the new *scuola media* closely resemble those of the old (strictly academic) *scuola media* with some additions from the old *scuola d'avviamento* programs, such as percentage and interest calculations. As the French so also the Italian programs always have arithmetic and geometry running parallel. (The German programs do the same.) Grade 6: whole numbers, decimal fractions, introduction of powers and roots. Use of tables. Divisibility. Fractions. Triangles, angles, quadrangles Grade 7: Square roots, rational numbers. Elements of correspondence and of functions. Interest, discount. Polygones, theorem of Pythagoras. Scale reductions. Grade 8: Graphic presentation of functions. Diagrams. Relative numbers. Equations of first degree. Circle, solids, surface and volume.

For a comprehensive school type this mathematics program seems quite ambitious. But as in the case of France, one must consider that less than half of the children, up to now, are enrolled in a *scuola media*, although enrollments are steadily rising. A number of children still attend terminal elementary classes, but their number is fast decreasing, and no distinct program for those classes is available. (Moreover, as mentioned in earlier chapters, numerous children of poor working-class and rural background quit school altogether after the 5-year elementary school.)

In Germany, the situation concerning mathematics is more complex because of the different school types. For the purpose at hand, only the programs for Gymnasien and Volks- or Hauptschulen will be discussed; the Realschule programs may be estimated as lying somewhere between those two. For the Gymnasien, as mentioned earlier, the revisions of recent years have drastically up-dated the mathematics curriculum. The programs have not only been enriched with new elements but also accelerated; many features are taught nowadays two years earlier than in past times (e.g., geometry). Parents often complain of over-demands made on the capacities of their children, but this may be as much a matter of teacher competence as of program design. It should also be recalled that German schools devote four weekly hours to mathematics compared to three in French and Italian schools.

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[91] See Tullio Viola, "Sull'Insegnamento della Matematica e delle Osservazioni ed Elementi di Scienze Naturali nella Nuova Scuola Media," Relazione presentata alla Commissione Italiana per l'insegnamento Matematico, Genova, 29 Sep. 1963, report in offset.

The following curriculum program is abridged from the Bavarian guidelines for Gymnasien (1966) and for Hauptschulen (1964). Gymnasium grade 5 (first grade of this school): Natural numbers, zero definition of quantities and sets. Decimal system with some reference to non-decimal systems. Basic number operations, letters may be used in explaining arithmatic laws. Drill in mechanics, also without use of paper and pencil. Advance estimate of result. Use of parentheses. Text problems. All sorts of common measures. Prime factors, largest common denominator, etc. Geometry: rectangle, square and cube. Basic geometric concepts. Grade 6: Fractions, all basic operations. $ax = b, a \pm 0$. Decimal fractions. Simple graphic presentation. Text problems. Percent. Cylinders, circle, angles (introduction). Grade 7: Algebra, simple linear equations. Letters as symbols of rational numbers. Discussion of insoluble and multi-soluble equations. Geometry proceeding from descriptive and mere measuring to analytic activities. Parallels, symmetry. Triangle, congruence. Grade 8: Negative rational numbers. Vectors. Equations. The Cartesian coordinate systems. Linear functions, basic characteristics. Point symmetry. Circle tangents. Calculation of area. Prism, volume of prism. Projection (draft) of prisms.

The Volks- or Hauptschule program is quite different in that it maintains a close relation to practical life. Designed for the "lower" 60 per cent of the age group, it has no parallel in the French and Italian directives (as explained above). Similarly, as in the French general recommendations, there is stress on mastery of basic operations, on precision, logical comprehension, individual thinking (e.g., in attempting different ways to solve a problem) and inductive approach. One advice, typical for Germany, is added: "Thoroughness ranks over speed."

Grade 5: The basic number operations. Introduction to fractions, decimal fractions. All measures. Concepts of buying and selling, income and expenditures, costs and savings. Graphic exercises: lines, columns. Grade 6: Operations with fractions, factoring, text problems. Average. Per cent. Application in cases of daily life. Increase, decrease. Graphic design on squared paper. Grade 7: Fractions, per cent continued. Use of per cent in public life, statistics. Simple figuring of interest. Wage and price changes. Pro mille (in insurance use). Proportions. Problems dealing with rent, lease, down payment, installment buying. Graphic design continued. Grade 8: Interest continued. Discount. Stocks, mortgages, paying by check, foreign currencies. Use of simple table. Graphic presentation of arithmetic problems and their results. The circle as means of presentation.

Geometry in the Volksschule is treated as a quasi-separate subject that is called "Raumlehre" (spatial studies). Although it shares the weekly four hours allotted to arithmetic (called "Rechnen" in the Volksschule), the guidelines recommend to concentrate, for periods of time, all four hours alternately on one of the two fields. The overall objective of "Raumlehre" is to develop "the ability to recognize, present and calculate spatial forms in their environment" (not in the abstract, as typical for the Gymnasium). All instruction in this field starts from the concrete object and constantly involves active manipulations on the part of the pupils: measuring, weighing, building, molding, folding, cutting, combining, removing, etc. All sorts of tools are kept available for this purpose. The calculation of areas and bodies begins with sketches, hypotheses, and estimates before formulae are applied. The calculation of areas starts from the two-dimensional units, not the length units; the calculation of bodies starts from three-dimensional units (not two- or one-dimensional units). In other words, the procedure is clearly inductive.

Annual programs: Grade 5: basic shapes familiar to children; recognition of surface areas on bodies (quadrangle, triangle, circle) Angles. "Perceiving, representing, and calculating" squares and rectangles. Drawing to scale. Area studies out-of-doors. Grade 6: "Perceiving, representing, and calculating" triangles, parallelograms, trapezoids. Cube, cubic measures. Prisms with quadrangular and triangular bases. Grade 7. Circle, circular angles. Cylinders. Problems involving specific weights. Grade 8: Regular and irregular polygones. Pyramides, cones.

Natural Sciences

No other subject outranks science in importance when the adequacy and the modern character of school programs are examined. Science teaching today plays a role as an economic factor, as a cultural factor, and even as a political factor.[6] The advances made toward a stronger position of science in the curricula of the three countries under scrutiny appear modest, at least on the middle level. The most recent ministerial guidelines, to be sure, discuss in some detail the introduction of elementary training in scientific methods, but the syllabi give little room to such training; and its implementation seems especially hampered by the teachers' insufficient training for the new approaches that are officially recommended.

Traditionally, French and German schools (academic and non-academic) taught botany and some animal biology in grades 5, 6, and 7, for two weekly hours (in Germany) or one-and-one-half weekly hours (in France). In grade 8 German pupils in addition studied elementary physics (mechanics, optics, etc.), the French pupils (except those in terminal classes) geology. The methods in these courses stressed "observation" and categorization; in fact, the term used in France for these courses was--and is--"sciences d'observation," and they are listed this way in syllabi and schedules. Another term, occasionally used, is "sciences naturelles." The German equivalent is "Naturkunde," i.e., nature studies, which refers only to the living phenomena of nature. For the study of physics and, in higher grades, chemistry, the German academic schools use these terms, while the Volksschulen use "Naturlehre" (nature instruction). The German word "Naturwissenschaften" (natural sciences) as a comprehensive term is used only in academic schools; nothing at the Volksschule would ever be termed "*Wissenschaft*," since by strong tradition and purpose this school type is devoted to the non-*Wissenschaft* pedagogical approach.[92]

In Italy, only the (semi- or non-academic) *scuola d'avviamento* imparted some elements of science: the commercial *avviamento* schools resembling in their science syllabus the French and German patterns, the industrial schools relating the instruction "strictly to the vocational training program."[93] Italy's academic schools offered the first course in science not before grade 11; neither the *scuola media* nor the *ginnasio* (grades 9-10) included any science teaching in the curricula. Therefore many persons in Italy--all those who left the academic schools before grade 11--never had a lesson of science (or biology) in their educational background.

The recent reforms show the intent to infuse some elements of modern scientific training into the traditionally word--and book--dominated school programs. In the new Italian (common) *scuola media*, two noval subjects were introduced: "*osservazioni ed elementi di scienze naturali*" (two weekly hours in grades 6 and 7, three in grade 8), and "*applicazioni techniche*" (two weekly hours in grade 6). The ministerial guidelines state as objectives of these courses the development of "conscious observation, experimentation, reflection on facts and phenomena." Starting from observation, the student should be guided to analyze, measure, verify, and learn the facts, and above all learn about the method of scientific procedures. In addition, the teacher shall lead the student from the recognition of the simple phenomenon to related facts and phenomena so that he may gain general familiarity with the realm of natural sciences. In the end, the student should have acquired not only a feeling "for the harmony and beauty of nature" but also an "orderly and synthetical view of the world that surrounds him."[94]

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[92] In German usage, the term "*Wissenschaft*" is broader in some respect and narrower in another than the English "science," as commonly used. It is broader in including any field of systematic inquiry and study, not only empirical sciences but also, e.g., literature and history (more specifically referred to as "*Geisteswissenschaften*"--sciences of the mind). It is narrower in that it refers only to advanced scholarly activities: analysis, reflection, synthesis, interpretation, criticism, etc.

[93] Italy, *Scuola di Avviamento Industriale*, series "Programmi Scolastici," ed. Pirola, Milano, 1959, p. 3.

The subject areas to be covered are merely indicated in broad outlines: during the first two years, "spontaneous and guided observations in the field of biology--under morphological and physiological aspects--and in the field of physics, including the most common applications made by man" should be conducted. The third year will follow this up with more systematic studies of the notions previously gained. An integrated approach to scientific studies is advised; as an example, the guildelines point to the opportunities of connecting the treatment of nutritive and reproductive functions of plants and animals with observations and concept formation in physical and chemical respects. (Ibid.)

The new subject, "technical applications," is a modernized version of the traditional "manual work" (or "shop" in American usage). It is planned to utilize the learning acquired in "observations and elements of natural sciences." Its scope is broad: "to satisfy the manipulative interests of children, to develop a sense of dimensions and forms by means of graphic representations, to accustom the young to consider functional and aesthetic elements in general constructive activities, to develop--through practice in technical operations--elementary knowledge of materials and tools, with their characteristics and functions." The students should be guided toward "reasoned doing" ("fare ragionato"), in other words, the tasks and operations should be planned and their results should be projected and estimated by the students themselves. This should lead to habits of critical anticipation, reflective thought, and application of previously learned theories. The projects should preferably be designed as group work, thus impressing on the students the spiritual significance of human labor and its social aspects in our present world.

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[94] Scuola Media Statale, Orari e Programmi, op. cit., p. 45.

These objectives and recommendations bear little resemblance to the traditional style of manual work classes with their stress on practice and perfection of manual skills. The new course instead aims at intellectual and social training through the practical or "technical" projects, in the style of John Dewey's principles, the influence of which may be sensed in the two new courses that introduce scientific and technical elements into the scuola media. A further recommendation that fits into this style concerns "coeducation": as far as feasible, boys and girls should be taught together on work projects in home furnishings, horticulture, etc. For work in other areas (metal work, household work) boys and girls will be taught separately. Only one year of this course is prescribed for all. During the second and third year, this course becomes elective and is then competing with Latin as the alternative elective. This circumstance leaves for "applicazioni techniche" in these years a less able student body, and therefore the level of teaching may be expected to differ considerably from the first year.

Impressive in their modern spirit as these course designs are their implementation raises understandable difficulties, primarily because the teachers are not yet prepared for this type of instruction. The science course is planned to be taught by the mathematics teachers (who have no training in science teaching), or by science teachers (not prepared to teach mathematics). Science teachers, moreover, have studied only one natural science field and thus are not properly prepared to teach the combination advocated for the scuola media.[95] The technical application courses are usually taught by former avviamento school teachers, who were trained in the traditional manual craft instruction, but not in the Dewey-style approach. It will obviously take years until these new subjects, except for some fortunate circumstances, can be taught as envisioned in the official plans.

The French situation is in some ways similar to the Italian with respect to the effort of introducing scientific method in the common middle-level curriculum. Different, however, from Italian custom, the pre-reform curriculum in the French lycée and collège classes included some science on the middle level: elementary botany, biology, and geology. These courses have been maintained with insignificant changes of subtopics. The 6th grade studies the human body (skeleton, muscles, alimentary system), the vertebrates, and flowering plants; the 7th grade studies the invertebrates, flowerless plants, and, in form of a survey, the useful and non-usable animals and plants, plus some aspects of the role of man in nature. The 8th grade science program is entirely devoted to geology.

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[95] These problems are discussed in detail by Tullio Viola in his report, "Sull'Insegnamento della Matematica e delle Osservazioni ed Elementi di Scienze Naturali nella Nuova Scuola Media," Relazione presentata alla Commissione Italiana per l'Insegnamento Matematico, Genova, 29 Sep. 1963.

The schedule provides in all three grades one and one-half weekly hours for this subject, to be utilized in this way: one hour every two weeks of "course" (in the traditional manner), one hour each week for "practical work" with divided classes, i.e., groups of no more than twenty-four students.

The latest official guidelines (of 1964)[96] have reprinted elaborate instructions of 1954 on the methods in natural science instruction. They stress the "method of inquiry or rediscovery" and speak of the hope that this approach may gradually inspire not only the teaching of science but all teaching on the secondary level. . ." (ibid., p. 6). In this spirit, the detailed suggestions--including a sample lesson for a 7th grade--reiterate several times the importance of pupil activity. "The students actually should carry on the lesson; the teacher merely guides and stimulates them" (p. 7). For a proper implementation of this method, certain conditions are described as necessary: the access to "local documentation," (concrete features of the environment that can be directly observed) and the teacher's familiarity with these features. The difference between "course" hour and "practical work" is explained: the former serves to systematize, synthesize, and to check on proper note-book recording and mastery of the facts and concepts worked out during "practical work." Explicit warning is extended against "le style dogmatique" (which should be reserved for higher grades only. For further detailed suggestions, reference is made to reports in the "Cahiers Pédagogiques," which serve as practical guides in classroom procedures, especially in the novel approaches introduced by the reforms of the 1950's and '60's.

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[96] Ministère de l'Education Nationale, Les Sciences Naturelles dans les lycées classiques et modernes, Paris, Institut Pédagogique National, n.d. (1964).

The sixteen pages of guidelines--including circulars of 1961 and 1964--that are devoted to the conduct of this science course give the impression that there exist difficulties in the scheduling and the general implementation as outlined in the official plans. One problem seems to be the shortage of time allowed by the schedule for practical studies, which require set-up of materials or even trips outside the school grounds. The other problem mentioned is the coordination of the practical work and spontaneous interest in the two halves of the subdivided class with the theoretical or "course" instruction which the class receives as a whole.

While the subject of "sciences d'observation" continues an established tradition in the form of "science naturelle" (biology and geology), in 1960 a new subject has been added to the programs of the "observation cycle" (the first two years of secondary school), but only in the modern, not in the classical sections. It is called "travaux scientifiques expérimentales" (experimental scientific work) and is scheduled for one hour a week. The official guidelines state three major objectives of this new course: a) to broaden the students' opportunities to discover and develop their interests and abilities; their potential aptitude for science should be judged on a broader basis than achievements in mathematics; their potential aptitude for technical studies--be they industrial or economic--should be judged on a broader basis than the traditional manual work; b) Analogous to the literary education with its training in linguistic logic and expression, the scientific education requires a progressive training in methods of experimental research and reasoning. Quoting from statements written by Langevin in 1931, the directives recommend to "continue the practical work of the primary schools with their 'leçons de choses' by an introduction of physical-chemical studies earlier than the traditional school programs provided." (ibid.) Reference is also made to the psychology of the pre adolescent, who tends to strive for orientation in the matters of reality and for generalizations from observed phenomena; c) The purpose of experimental scientific work goes beyond the training in observation and reflection based on concrete sense impressions: it aims at developing abstractions and the ability to deal with qualities and quantities in the various scientific media of communication, foremost linguistic formulations. In conclusion, the statement of goals emphasized: "Too often in the past the modern section has been defined in negative terms, as a section without Latin. The experimental scientific work attempts to give it a positive definition as education for the modern world, as a source--no less than the traditional disciplines--of critical reflection, of abstract thought, of human culture" (ibid., p. 237).

In discussing the content of this course, the directives emphasize that no systematic program of content coverage should be followed, because the focus is on scientific methods and attitudes. "In accordance with what always has been the ideal of our culture, the accent will be placed on the methods of forming the mind, not on the content nor on the acquisition of fixed knowledge." (p. 238) Two categories of projects are outlined: one that combines elements of geography and nature studies with those of mathematics, physics, and chemistry. (Examples include "climate and man," "forest and man," "the eye and optical instruments.") The other category leans more toward mathematics and technical topics such as "the bicycle," "the motor." The pedagogical methods recommended stress, even more elaborately than for the sciences naturelles the principles of pupil activity, of inquiry, experimentation, etc.

The "practical suggestions" that follow deal with questions of staffing, scheduling, equipment, and collaboration. Staffing: the teacher of history, geography, or nature studies should preferably teach the first category of topics. But any other teacher who is interested and qualified may also be assigned. The second type of topics should be entrusted to a mathematics or science teacher. No teacher, of course, had any training in this type of comprehensive approach. Schedule: greatest flexibility is advised. Hours can be combined and perhaps supplemented by hours assigned to "directed activities" (as part of other courses). Collaboration: teachers of different subjects should closely coordinate their own planning with this course. The class council (consisting of all teachers assigned to teach a course in a given class section) should serve as clearing center. Equipment: mainly measuring instruments are mentioned as required apparatus (no laboratories). As far as feasible the students should make their own instruments and equipment, e.g., in manual work courses.

Finally, the teachers are advised to keep themselves an experimental attitude toward this course, to use their imagination and combine their initiative in implementing successfully this new program feature, which "constitutes one of the fundamental elements of the school reform." (Ibid., p. 242)

How well the schools are able to carry out the plans and recommendations is, of course, an open question. In view of the problems, the answer to it should wait till several years have passed. But what seems of immediate interest is the design of such a course, which in defiance of all tradition is frankly devoted to method, and not to any systematic content. There may be doubting questions whether such a severance of "methods" from any orderly disciplinary approach is advisable. (Present-day American approaches seem to be in the opposite direction.) Above all, one may ask, why not integrate the valuable features of this course with the related subjects of the curriculum (sciences d'observation, geography, history, etc.)? A good reason for not doing so is very likely the assumption that only in a set-up unfettered by requirements of content mastery would the teachers concentrate on the proposed new method as the sole focus of the course.

The revised subject, "manual work," also deserves mention when new programs in scientific education are discussed, since according to the guidelines (of 1960) the objectives of "manual work" now resemble closely those of the two afore-mentioned subjects. "Manual work should train not only the manual skills in the narrower sense but also the mind in general; observation, imagination, inventive spirit, judgment, taste. . . ." (Ibid., p. 228) The training programs for girls, for example, should go beyond the teaching of manual household skills and of some recipes: their future tasks in a modern home requires abilities of organization and methodical procedures: their practical functions should be based on reflection and intelligence.

In addition, the manual work course--as also the one in experimental method--should be used to detect the pupils' aptitudes and interests, their work attitudes and even their levels of intelligence. Especially those children who are not yet adjusted to the modes of formal thought and expression, which prevail in most other subjects, will have opportunities of manifesting their potential, and often unexpected, capacities in the various activities connected with concrete objects.

It is noteworthy that manual work--a course of one hour a week--is compulsory for all students in all sections through the ninth school year, three years longer than in Italy. Following the ninth school year it is available as an elective throughout, even in the classical sections. Academic students--according to persons familiar with French school life--often use this subject to get some respite between strenuous academic courses. Manual training certainly plays a minor role in the traditional lycées with their heavy intellectual emphases. But the plans and principles of the revised course in manual work should offer good opportunities for those students who desire advanced schooling but are less interested in the exclusively literary-historical-mathematical approach of the lycees. Again--the design seems very promising and modern, its realization will have to be assessed at some future date.

In Germany, science curricula on the middle level (grades 5-8) have neither undergone major changes in content nor have they been expanded by new courses, as in Italy and France. Though the official guidelines stress modern approaches and emphases, this seems to be more a strengthening of what was considered "good teaching" in earlier years, rather than an introduction of novel elements into the style of instruction. For example, nature studies courses have traditionally included concrete observations and "activities" by the pupils. Beyond these, the new directions (of the 1960's) focus in elaborate fashion on cognitive learning objectives. From qualitative and quantitative assessment, the pupils are to be led to recognize generalizations, order systems, ecological and causal relationships, also the physico-chemical components of living organisms, and the practical application of natural phenomena to human living.

Experimental work as well as group projects--designed as new separate course in the French intermediate grades--are integrated within the regular course programs in the German systems. The use of instruments (microscopes, etc.) and visual aids is considered necessary as are simple experiments by students, not merely experiments demonstrated by the teacher. "Book-and-chalk" learning is explicitly condemned. An important part of the instruction are trips to the outdoors, to botanical gardens, the zoo, and (for physics and chemistry) industrial plants. German schools have a long tradition of regularlyschedulingsix to eight "excursion days" per year, when all classes take trips with their homeroom teachers. (Upper grades may even spend several days, taking hiking trips or visiting places of interest, even in foreign countries.)

Aesthetic elements and "reverence for nature" (in Catholic classes usually coupled with religious overtones) play a greater role in German schools than apparently in Italian or French schools. School gardens are highly recommended in the guidelines (and frequently found in reality) especially in city schools, to compensate for the "alienationa from nature" so typical of modern urban living. Both Berlin and Northrhine-Westphalia include comprehensive programs for garden work in their syllabi for the 7th-9th grades of the Hauptschulen (not the academic schools) in conjunction with the regular biology courses. Conservation is stressed in all Länder plans. In Bavaria, the teaching of conservation as a task for the schools is even proclaimed in the state constitution.

The German system of parallel school types on the middle level provides for different science programs in the Gymnasium, the Realschule, and the Hauptschule. While all three school types have botany-biology for two weekly hours in all middle grades, the time of introduction for physics differs. The Gymnasium begins to teach physics systematically for two weekly hours in the 8th grade,[97] while the Hauptschule and the Realschule include elements of physics in their science courses as early as the 5th grades, resp. 7th grades.

In regard to content, the science curricula in Germany are more explicit and more topically organized than the French and Italian programs. The Hauptschule programs, for example, are generally designed according to the natural patterns of ecology: The 5th grade deals with the plants and animals most familiar to the child: pets, farm animals, birds, butterflies, insects; the plants of home, garden, and park in their seasonal sequence. 6th grade: plants and animals of fields and meadows (grains and other farm products, small wildlife). 7th grade: plants and animals in forests, swamps and water ecologies. 8th grade: one-cell organisms, viruses, etc., elementary genetics; the human body and hygiene. The Darwinian theory is mentioned only in the Berlin program for the Hauptschule

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[97] There are occasional variations among the Länder: Bavarian Gymnasien begin physics not before grade 9.

(the academic schools always include it). Biological facts of human sex and reproduction are usually not included in the guidelines (nor are they in the French or Italian directives).

As mentioned earlier, much attention is given to the objectives, concepts, and didactical methods that the teachers should keep in mind. There is repeated warning not to overload the pupils with facts but instead to apply the "exemplary learning" approach, i.e., using selected models for thorough study and treating similar phenomena in less detail.

The Realschule follows a similar patttern, based on the schemata of ecology as they are familiar in the experience and observation of children.

The Gymnasien, in turn, have biology programs that are structured more on the logical order of scientific categories, as is quite apparent from the terminology used in the syllabi. Yet in the lower grades (5 and 6), the topics of study are similarly selected from the familiar plants and animals of the home environment.

5th grade: flower plants--general structure of blossom, leaf, stem, etc. Basic elements of a living organism. The latter also exemplified by mammals known to the child (pets). The human body.
6th grade: Certain families of garden flowers and plants. Seeds and growth. Birds, the egg, living patterns; the varieties of forms of one functional feature, such as beak or wing.
7th grade: Trees, including conifera; grains and grasses; foreign field plants and products. Small vertebrates and invertebrates, fishes; extinct animals.
8th grade: Mosses, ferns, etc.: extinct plants. Worms, insects, social behavior of animals, instinct patterns, ecological interdependence. Comparison of analogous and homologous organs.

The Gymnasium guidelines of Northrhine-Westphalia (of 1963) point out that the biology teacher of the 6th and 7th grades should feel responsible for explaining to the children in informal, factual manner--when there is good opportunity to do so--the facts of the human sex characteristics. Even if human biology is not part of the general plan for these years, connections could be made with suitable topics of animal biology. Several other *Länder* include similar remarks regarding the biological elements of human sex.[98]

Illustrative of the attention to systematic training in cognitive processes in the *Gymnasium* is this schema found in the Northrhine-Westphalian directives:

> Biology is well suited for the gradual transition in the learning style as the children arrive from the *Grundschule*, where the teaching approach is "wholistic." In biology teaching, the process of recognition and learning should proceed--broadly speaking--in this manner:
>
> a) Perceiving the complex whole of the object (the organism)
> b) recognizing the component parts of the whole
> c) isolating and observing certain individual features or parts
> d) presenting the structured whole of the living organism.

This schema is followed by a series of practical suggestions, including the advice not to adhere to the basic steps in rigid fashion. This brief account does not do justice to the didactical elaborations of the guidelines but it may suffice to point out the obvious difference between this approach and the less analytical and more pragmatically oriented approach in the *Volksschlule*. On the other hand, the *Gymnasium* guidelines for biology do not neglect the sensitivity, esthetic awareness, and love of nature that this course must foster in the children. Concrete contacts with nature (trips, garden work, etc.) as well as visual aids and the reading of stories about animals and outdoor life are also recommended for the lower *Gymnasium* grades.

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[98] Bavaria, e.g., puts in more general terms: "The understanding of the sexual polarity of living organisms and of the genetic idea should be prepared already in the early *Gymnasium* grades; but these topics can be dealt with more thoroughly only later in the context of other life processes." "Lehrpläne für die Höheren Schulen in Bayern," Amtsblatt . . . , *op. cit.*, No. 17 of 16 Sept., 1964, p. 513.

The programs and approaches in physics show even more differences than those in biology when the different school types are compared. The Gymnasium introduces physics in the 8th grade, i.e., after the pupils have had three years of experience (in biology) with precise definitions, inductive procedure, experimentation, and elementary abstract thought processes. The guidelines for physics on this level recommend to still give much room to phenomenological perception, and to lead students gradually to systematic abstraction. The students are to learn to arrive at questions from the realities observed in everyday life and to design experiments that would yield answers to these questions. The experiments should be preceded by hypotheses and estimates of results. Some experiments can be carried out merely in thought, not in actuality. In solving problems students should by no means try merely to apply memorized formulas without understanding the context.

The content of the 8th grade physics courses usually comprises mechanics: energy, mass, weight, force, pressure in solids and liquids, air, gases, etc. The application of mechanical laws in modern technology should be amply demonstrated; this should also be done by observations in industrial plants, construction sites, etc. The Hessian Gymnasium curriculum in science--as revised in 1962--changed the 8th grade program from mechanics to elementary thermodynamics and optics, postponing mechanics to the 10th grade, since the latter requires a great deal of quantitative experiments and mathematical calculations.

The Hauptschule curricula for science instruction include simple notions of physics from the 5th grade on and elements of chemistry from the 6th or 7th grade on. They are quite different from the Gymnasium programs and also vary greatly among the Länder. But they all have in common the entirely inductive-pragmatic approach: starting from some of the innumerable objects and technical processes of everyday life, the children are taught the basic concepts and relations that govern the observable phenomena. The almost overwhelming lists of possible topics presented in the syllabi are arranged not in eclectic manner but so as to focus on a complex entity observed (the water and all its characteristics, construction of a building), or--more frequently--to focus on a field of physics: mechanics, heat, optics, electricity.

For the 5th and 6th grades, recommended topical groups include "electrical appliances" to teach heat and light effects of electric current, circuit, ducts, etc.; "the air" (rubber balls, bicycle tires, pump, breathing, burning, wind) to teach air pressure, currents, etc.: "sounds" (auto horn, bell, starting pistol, thunder and lightening, echo) to teach acoustics; "house construction" and "playground things" to teach mechanics. The 7th and 8th grades include household fuels, metals, foods, etc. to teach chemical elements. The approach, in general, seems to resemble that of the American "general science" courses in the junior high schools.

One feature, however, would not be encountered in the U.S. public schools. That is the different science curriculum for boys and girls in the school plans of Bavaria and Northrhine-Westphalia (Catholic influence). Girls--from the 6th, resp. 7th grades on--have one weekly hour less than boys in science. Instead, they have one more hour of home economics (three per week) than the boys spend in manual work (two per week). The girls are to get a good deal of food chemistry in connection with their cooking instruction, while the boys have different chemistry topics in their science classes (e.g., mineral chemistry).

In general, even if only a portion of the topics listed for the teacher's selection are dealt with, it seems that the students--the non-academically oriented "mass" of the young people--obtain a remarkably well-rounded orientation for living in the modern world of technology. How well these extensive science programs in the _Hauptschule_ are being implemented will depend, as usually, on the training and competence of the teachers. The reform plans provide for special teachers in a field like science. Teachers who during their training majored in science are preferably assigned to such courses. Their training included didactics and methods of science instruction. Among the _Volks_- and _Hauptschule_ teachers they are considered the "elite," and they are in short supply because of competing job attractions in industry, a dilemma familiar also to American education.

VII. QUANTITATIVE COMPARISONS OF CURRICULAR PROGRAMS

A comparative assessment of the number and distribution of class hours assigned to the different subjects in European schools has more relevance than American educators would probably assume. To be sure, the quantity of instructional time can not tell anything about the content, the method, or the efficacy of teaching. But a quantitative comparison is informative in several other ways. The initial offering of the subjects on particular grade levels generally reflects European conceptions of optimum learning age (e.g., for foreign languages). The proportion of time allotted to a subject demonstrates its relative importance in the total program; and the changes in these proportions are good indicators of trends and developments in basic policies and emphases in the public education systems.

The tables, charts, and diagrams have been compiled for this project from the various class schedules found in the latest ministerial directives of the three countries, most of them issued between 1963 and 1966. For comparison, the data from the preceding issues of these schedules have been added, most of these dating back to the late 1950's or early 1960's.[99] The changes show distinctly the most recent developments in Europe.

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[99] The use of still earlier versions would have shown more drastic changes in some cases, but would have been impractical for several reasons. E.g., some of the structural school reforms did not take place before the late '50's. Using the old structural scheme would have rendered the comparisons less meaningful and the number of school types involved even more cumbersome than it already is.

West Germany, because of the variety of patterns among its 11 Länder, has been given more graphic presentations than France and Italy with their uniform patterns. The selection of illustrations is mainly based on the degree to which a Land pattern demonstrates a point under discussion or a special characteristic. Since this project purports to show trends rather than an image of the total situation, it seemed justified to use some features from one Land, other features from other Länder.

All the charts have been designed as general schemata, and not in proportion to actual enrollments in the different school types. Had the latter been done, the non-academic type or branch of school would have to be drawn more than double as wide as the other types (branches) combined, and the top columns of the academic programs would have been very thin, accounting for less than 10 per cent of the age group.

Chart I shows the structure of the entire school systems of France, West Germany, and Italy, and the place of the "middle level" within the systems. The beginning of this level--internationally known as "lower secondary stage"--is clearly defined: it follows the five (or four, in Germany) years of elementary (primary) school. The end of this level has a structural demarcation only in Italy: the terminal point of the scuola media. In Germany, until recent years, this point (completion of the 8th grade) used to be the end of the Volksschule; the latter now has been extended to nine years in all Länder. In France, the completion of the 8th grade is, in effect, still the terminal point of schooling for nearly half of all children, mainly those in rural areas, who attend the still existing "classes de fin d'études." But the reform laws have extended compulsory education to age fifteen (with the goal of sixteen projected for some time in the 1970's), even if at present the extended school attendance cannot be either widely implemented or enforced. In Italy, eight years of schooling (completion of the scuola media) still marks the limit of the legal requirement, and even that cannot be generally enforced, especially not in the South.

Chart II offers a graphic explanation of the various terms used for the grades and grade combinations within the middle level. The heavy lines frame the years of the middle level, but they should, for France and Germany, not be mistaken for demarking terminal points of the school types (except for the French classes pratiques). For the French and German systems, the diagrams clearly show the subdivision into three different school programs beginning with the VIth resp. Vth grades, and the subdivision of the academic groups into classical and modern-language types. In contrast to these, the new unified scheme of the Italian middle school level is graphically evident.

Charts III-XII show the curriculum developments for the different school types in the three countries. Some technical explanations of the diagrams: The vertical columns show the weekly schedule of subject-hours for the different grades (VI, VII, VIII). The thinly outlined columns indicate the "old" plans, the heavily outlined columns the "new" ones, i.e., those currently in effect. The figures above the columns are the totals of weekly school hours. The charts beneath the columns contain the weekly hours per subject for the three years, both in raw figures and in percentage of the totals of weekly hours (in the three years). These three-year combinations show (more clearly than figures for any single year could) the quantitative changes, in other words, the developments or trends.

The terms here used for the school subjects have been somewhat standardized to facilitate comparisons. "National language" means, of course, either French, or German, or Italian. "Social studies," a term not used in any of the three countries, includes history, geography and civic instruction. In Italy, these three are not separated in the schedule; in France history and geography are combined but civic education (one-half weekly hour) is listed separately; in Germany all three are separated in the schedules. "Mathematics" is used uniformly, even where (in non-academic programs) the official terms may be "arithmetic," etc. Similarly with natural sciences: this term here includes subjects called "*sciences d' observation*" and "*travaux scientifiques experimentaux*" as well as "*osservazioni ed elementi di scienze naturali*" and "*Physik*," "*Biologie*," "*Naturkunde*," etc. "Practical work" is used for "*travaux manuels*," "*applicazioni techniche*," etc.

Charts III to V include the curriculum development in the three main types of school programs of France. Chart III shows the academic curriculum of the *lycée* or the *lycée* branch within the comprehensive *collège d'enseignement secondaire*. The differences between the classical and the modern academic programs are apparent; the classical one includes eight hours of foreign language (formerly seven): Latin and a modern language, starting simultaneously in grade VI; while the modern type has only five hours of one (modern) language, but instead two more hours of French and one more hour of science. Notwithstanding these difficulties in time allotments, the curriculum programs (except for Latin) are identical in the two branches, according to the official syllabus.

One curriculum feature that is found only in the French system (not in the other two countries) is the one weekly hour of manual work in all grades, even in the academic branches. Another unique feature in France (paralleled only in the schools of Berlin) is the absence of religious instruction in the school curriculum. Such instruction is provided by the religious bodies on Thursdays, which traditionally have been kept free of school hours for this purpose.

In regard to quantitative changes, slight increases in the total number of hours can be noticed in both branches, classical and modern. In the latter, the additional hours were mainly assigned to science (or more precisely: to "experimental scientific work" during the two-year observation stage); in the classical branch, the number of foreign language hours was increased, which now accounts for 34.2 per cent of the total class hours on the middle level.

Chart IV shows the semi-academic curriculum structure of the collège d'enseignement général (or of this branch within a comprehensive collège d'enseignement secondaire). Before the recent reforms, this type of education was called "enseignement général court," a term which is still occasionally used. For the first two years--the "classes d'observation"--its curriculum is identical with that of the "modern" lycée classes. Both types, in fact, are termed "modern": the lycée branch, "modern I" (formerly "modern long") with a second foreign language beginning in grade VIII: the *collège* branch, "modern II" (formerly "court" = short) with only one foreign language, but with more mathematics and science hours from grade VIII on. The column for this grade shows a marked increase of hours in the latter two subjects (from four-and-one-half hours to eight hours). It also shows slight increases of time for social studies, foreign language, art, and practical work. These changes may be regarded as an upgrading of the former "short general education" toward a more thorough preparation for technical training and comparable applied fields in the modern industrial economy.

Chart V, devoted to French non-academic education, presented some problems in the design because of the general flexibility of program and the present state of flux in this type of schooling. Before the 1964 reform directives, the mass of children (about 60 per cent) who did not transfer to *lycée*, *collège*, or *enseignement court* classes after grade V, remained in their elementary schools until they reached the age of fourteen. According to the official plans, during the sixth year they had to repeat the program of the fifth year, since it was assumed that they could not have attained the goals of that year. (This program is shown in the first column.) Then, upon completion of the fifth-year elementary school requirements, a number of children used to pass on to the "*centres d'apprentissage*," which offered general and vocational training combined. These centers have now been abolished, since the DeGaulle reforms decreed that no vocational training may start before completion of grade 9 (or, in practice, age fourteen). The majority of children continued for two years (their 7th and 8th) in the so-called "*classe de fin d'études*." This terminal class, in which some children spent one year, others two years, followed a very unstructured program in adaptation to local circumstances and pupil abilities (see second and fourth columns). The guidelines for these classes emphasized drill in reading, writing, arithmetic, ample physical education outdoors, and a combination of practical work, crafts, and elements of science. One subject given in these classes was called "*morale*"; according to the syllabus, it included old-fashioned precepts in common virtues, ethics, and citizenship. (On the chart, it appears as "civics" in the old programs.)

The new program for non-academic education--designed to serve in the future about 40 per cent of all French children--aims at replacing the former dead-end final classes with so-called "*classes de transition*," which keep the door open for able children (and late bloomers!) to transfer to *collège* or even *lycée* classes. These "transition classes" in the future, are all to be housed in one of the secondary school types, to give them more secondary (upgraded) character and to facilitate the cases of later transfer. But there exist as yet very few transition classes: the large bulk of children are still completing school at age fourteen in *fin d'études* classes of primary character.

The new plans, too, provide for a repetition of the fifth-year program in the sixth year. (See first column.) Then follows one year (or sometimes two) of transition class. Its program (see third column) stresses French and upgraded science instruction, as a better preparation for life and work in the world of modern industries. What is missing in this program, however, is any chance for foreign language training. In view of the stress on languages

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in the other school types it seems that any later transition to these must involve considerable difficulties. (It should be mentioned that for such exceptional cases the plans provide special "classes d'accueil": receiving classes with intensified language instruction to help the children catch up with two years of missed language training.

For the great majority of "non-transferring" children, the last year (usually the 8th, and for repeaters the 9th, year) is a "classe terminal" with a clearly work-preparatory but not vocational training program. (See the last column to the right.) The core of the curriculum is a combination of studies of the local environment, including the regional crafts, agriculture, industries, etc., as an orientation in the children's future world of work. Vocational guidance and (modern) civic instruction are included, but no longer "morale" as a special subject. No foreign language is being offered.

Charts VI-X show patterns of the German curricula for the three school types. Several general observations can be made in comparing the schedules with those of the French system. All school types offer more hours of mathematics (uniformly four hours a week in all grades under study), also more time for art and music (two weekly hours each compared to one in France); and they include religion as a regular school subject.

The charts for the German curricula include the Vth grade, because the demarcation between elementary (Grundschule) and the lower secondary levels (Gymnasium, Realschule, Hauptschule) lies between grades IV and V. When comparing "total" hours devoted to individual subjects in the different countries, it is therefore advisable to use the percentages rather than the raw figures.

The German school week runs for six days, not five as in France. Afternoons are kept free of school, except usually one afternoon for sports, as in France.

Chart VI presents the schedule of the *Gymnasium*, modern-language and science type. As in the French *lycée*, the program differences between the modern-language and the science branches do not begin before grade X; in both countries, it is only the classical branch that has a different program right from the beginning, with Latin representing the core of instruction.

The *Gymnasium* begins a foreign language in grade V (commonly English in the modern type) and adds the second foreign language (French) in grade VII. (Both languages are started a year earlier than is the case in French *lycées*.) This pattern has been uniformly adopted in all German *Länder* by the Hamburg inter-*Länder* Agreement of 1964. In absolute terms and percentages of the total school hours, the German system includes more hours for foreign languages (24 per cent) and considerably fewer hours for the national language (14.7 per cent) than does the French pattern (21.9 per cent resp. 24 per cent).

Of interest are the changes between the old (1956-7) schedule (of Hesse) and the revised type (1961-2), still in effect. In three of the grades the weekly school hours were increased. The one hour of civics (here translated as "social studies" from "*Sozialkunde*") has been removed from grades V, VI, and VII; it now starts in grade VIII (two weekly hours). Instead, the hours for art and music in grades V and VI have been increased from two to three hours each.

The guidelines of the revised curriculum reflect the growing concern with a better preparation for the expanding leisure time in our modern world.

Perhaps the most striking difference between the German and the French modern academic curriculum is the schedule for grade VIII The German 8th grader has thirty-three weekly school hours, which include four hours of mathematics and four of two sciences. His French counterpart has only twenty-four school hours a week, among these three hours of mathematics and one-and-a-half hours of a science.

Chart VII. The curriculum for the classical type of Gymnasiu is identical for grades V and VI with that of the modern type, except that Latin takes the place of English. In grade VII, the second foreign language is added (English, five hours), but Latin is still assigned six hours a week. Grade VIII has the addition of a third foreign language, Greek, with six hours a week. Among the general changes effected by the revisions of 1961 can be noted--in the classical Gymnasium too--an increase of class hours in every grade, and an increase of 10 per cent of class time for the non-academic subjects (art, music, physical education).

The resulting heavy work load for students has its peak in the VIIIth grade with a schedule of thirty-six hours of instruction per week (fourteen of these in foreign language), the highest amount of any school type in any of the countries examined. Considering that a pupil has to spend an average of twelve to sixteen hours of homework per week, one can marvel at these official provisions that load thirteen-year-old children with fifty to fifty-five hours of school work per week. This extreme is found only in the classical Gymnasium but the modern type has merely a few hours less per week. No wonder that many German parents, physicians, and educators protest against the overload of work in the *Gymnasium*. A French 8th grader in the classical *lycée* has twenty-five weekly school hours (see Chart III) but also three foreign languages and very long hours of homework toil. Here, too, the public complaints are vociferous.

Some changes in this situation are underway in the West German *Länder*. Several of their school systems--among them Berlin and Bavaria--have issued revised *Gymnasium* curricula during 1966, with new schedules that kept the VIIth and VIIIth grade weekly loads at thirty-two or thirty-three hours. The Conference of Ministers of Education, in June of 1966, formally adopted a common set of "Guidelines and Recommendations for the Scheme of Instruction in Grades 5-11 of the *Gymnasien*."[100] These Guidelines were designed as a sequal to the "Saarbrücken Agreement" of 1960 and the "Stuttgart Recommendations" of 1961, both devoted to the programs and instructional patterns of the upper level of the *Gymnasium* (grades 12-13). Their aims were the modernizing and streamlining of the hitherto unreasonable amounts of work and *Abitur* requirements. Similar objectives guided the recent 1966 Guidelines for grades 5-11 adopted by the *Länder* ministers.

The first part of these Guidelines deals with the organizational structure of grades 5-11, the second with "didactics and methods" for individual subjects on the different grade levels. With respect to grades 5-8, the suggested program features closely resemble the pattern of the Hessian system--for our charts selected as model--except in two points: The third foreign language, also in the classical Gymnasium, should not begin before grade 9, and the total load of weekly hours should not surpass thirty hours in grades 5 and 6, and thirty-two hours in grades 7 and 8. (Grades 9-11 may have up to thirty-four hours) The Hessian ministry of education is presently working on program revisions for the Gymnasium to conform with these Guidelines, and the new schedules will go into effect in the Fall of 1967.[101]

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[100] "Richtinlinien und Empfehlungen zur Ordnung des Unterrichts in den Klassen 5 bis 11 der Gymnasien." Beschluss der Kultusministerkonferenz of 14-15 June, 1966, mimeogr., reprinted in *Bildung und Erziehung*, vol. 19, no. 4, July-August 1966, p. 292ff.

Charts VIII and IX follow a different schema. They are designed to demonstrate three different patterns of the Realschule (semi-academic) in Hesse, Berlin, and Bavaria. Unlike the Volksschule and the Gymnasium, this youngest of the German school types shows considerable variations in objectives and curriculum. Generally, the Realschule resembles the French "enseignement général court," now the prevalent program of the collège d'enseignement général. Both offer one foreign modern language and are planned to prepare their graduates for further technical, commercial, and semi-professional training (e.g., in nursing, child-care, medium-level administrative work). Since in Germany the Hauptschule (the non-academic school for the majority of children) through the recent reforms now also offers a foreign language and a structured curriculum with specialist teachers for certain subjects, the curricular differences between the two--*Hauptschule* and *Realschule*--seem very small up to the end of grade VIII. Grade IX, the terminal year for the *Volksschule*, shows pronounced differences, and grade X exists only at the *Realschule*. In other features, e.g., achievement standards, general ability of the student body, the teaching style, and the intensity of religious elements (less strong in *Realschulen*) there are differences between the two schools.

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[101] Information from Dr. Krog of the Hessian Ministry of Education, obtained by telephone in January, 1967.

Chart VIII shows the curricula of the two school types in Hesse, which appear at first glance very similar. The *Realschule* (the four columns to the right) has one less hour of religion each year, and more hours of English. Both schools have two hours of practical work in each grade. The *Realschule* has more hours of social studies in grades VII and VIII.

Chart IX compares the versions of *Realschule* in Bavaria and Berlin. They resemble each other in that both begin after grade VI, not after grade IV as in most other German *Länder*. Only the 7th and 8th grades are included in this chart, and in both cases the older and the most recent (1965) versions of curriculum. A further resemblance in both concerns the number of hours set aside for electives: this feature is absent in the Hessian *Realschule*.

The kind of electives available is one indicator of the different character of the *Realschulen* in Berlin and Bavaria. The former offers as electives either additional mathematics and science, or a second foreign language, or arts and crafts of an advanced type, e.g., interior and stage design, textile and clothes design, photography and cinematography; in short, academic, technological, or artistic subjects. The Bavarian pattern, from the VIIIth grade on, has a weaker academic and arts program to start with (but has religion!), and adds combinations of electives that are vocationally oriented: either commercial skills, technological skills, or home economic skills. From a Berlin Realschule, ambitious graduates will be able to transfer to a Gymnasium to complete the Abitur, the basis for admission to higher education. From a Bavarian Realschule this would hardly be possible because of the school's vocational orientation. For example, mathematics is here not algebra and geometry but technical mathematics or business arithmetic, according to the chosen combination of electives.

Chart X demonstrates a Hauptschule curriculum in a Land, where the 1966 reforms introduced some remarkable revisions. One major innovation--not apparent in this chart--is a flexible grouping of students from the VIIth grade on. For the purpose of upgrading the education of the broad population, the abler children (usually 60 to 70 per cent of the Hauptschule pupils) receive supplementary (more advanced) instruction in major subjects, such as German, English, mathematics, and science. These are electives of which the student must choose two or three. During those hours the weaker students get more practice in the basic elements and do not take English. The pattern of this chart shows the schedule for the (abler) majority. In all Länder, the bulk of program taken by all pupils in common is called "Kern" (= core) and the classes taken in separate groups are called "Kurse" (= courses). This Hauptschule curriculum also shows the large amount of time given to religious instruction, which is typical for Catholic-dominated Land governments. The latter also insist on separate public schools for Catholic and Protestant children, as is the case in Northrhine-Westphalia, Bavaria, Rhineland-Palatinate, and Saarland.[102]

A further feature of interest, found in some other Catholic Länder too, is the difference in curriculum for boys and girls. Co-education, formerly practiced only in small rural schools, is now increasing on the Hauptschule level. The ministerial directives of Northrhine-Westphalia (and similarly in Bavaria) state that our modern age requires for girls an equally intellectual education as for boys. Accordingly, as the chart is showing, the 1966 plans have reduced the differences in program schedule to only natural science and practical work. For girls, the science instruction is combined with home economics, while the boys have science classes separate from their manual work classes. Home economics for girls is usually given more time (and stress) in Catholic-oriented Länder than in the other Länder. (See, for example, the Hauptschule curriculum of Hesse, Chart VIII; no separate treatment of boys and girls is indicated in this schedule.)

Charts XI and XII show the curriculum changes brought about by Italy's reform for the new scuola media, introduced in 1963. The revisions in the academic as well as in the non- or semi-academic programs have been more pronounced than the changes in French and

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[102] In Bavaria, public protest against this tradition of separate schools is mounting, as noticeable from newspaper reports during 1966. A grassroot movement is underway to effect a constitutional amendment in this state whereby the public elementary schools would be religiously integrated. The heavy emphasis on religion is found only in the non-academic schools; the Gymnasium and Realschule curricula include two weekly hours of religion.

German schools. Two school subjects were added that formerly did not exist in the scuola media: civics (introduced in 1958) and, above all, natural science.

Chart XI gives evidence of the innovations. Formerly, the four subjects: Italian, Latin, history, and geography, were scheduled as the core of the curriculum, occupying over half of the class hours per week and being taught by one teacher. By all reports, oral and written, most of this time was devoted to Latin studies, some to Italian, and very little to history and geography. The rest of the schedule closely resembled that of the comparable French lycée classes. The new curriculum omits Latin in grade VI, and offers instead a modern language (two hours only). It also assigns specified time to social studies (four hours, which include civics) and science (two hours). In grade VII, Latin is offered combined with Italian in a bloc of ten hours. The modern language is continued. Grade VIII, in turn, offers Latin as an elective (four hours) separate from Italian (five hours). The additional three hours in modern language account for the total of seven hours in language instruction. This is much less than the foreign language classes in the equivalent German Gymnasium classes (classical or modern) and also less than in the French classical lycée course, but equal in amount to the modern lycée course. Since the new scuola media is planned to serve all children, not any longer the academic elite only, its program should also be compared to that of the semi-academic schools in France and Germany. It appears that the latter countries both offer more mathematics and science and less foreign language than the new scuola media in Italy. In other respects, the weekly schedules appear rather similar (except for the element of electives in the Realschulen in some of the Länder).

Chart XII compares the program of the new scuola media--in this case presented with the third-year elective of manual work rather than Latin--to the programs of two (of the five or six available) types of the now defunct scuola d'avviamento. To present the avviamento school curricula under the heading of "non-academic schools" is only partially correct; the agricultural and industrial types were certainly designed as non-academic, but the commercial and hotel-trade avviamento schools could actually be regarded "semi-academic" since their graduates could continue at a commercial liceo, and after graduation from there find access to certain university faculties, especially economics.[103]

The chief differences between the avviamento programs and those of the present common middle school concern the replacement of vocational subjects with expanded general education, and the availability of Latin to all children, a matter of major social consequence. (As discussed earlier, the knowledge of this classical language divides the population into "the educated" and "the masses.") On the VIth grade level, the commercial type avviamento school program was not strikingly different from the present common program. But the VIIth and the VIIIth grade programs with their extensive time allotment to vocational training allowed much less time (and probably interest) for "general education." Yet, general education is the central objective of the new scuola media. In one feature, the abolished avviamento programs were "ahead" of the old scuola media: they had always included some training in natural science. The curricula for the educated elite, instead, postponed the first encounter with science instruction to the 11th grade, a level which many students never even reached. The new scuola media includes science in each grade.

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[103] The completely non-academic classes which were (and partly still are) found as supplements to the 5-grade elementary schools (very similar to the French classes de fin d'études in rural areas) have not been included in our graphic presentations. They had no official curriculum structure and existed only in very limited numbers. But some of these classes were conducted in quite imaginative and successful ways. (See the observations of Joseph Justman in The Italians and Their Schools, Phi Delta Kappan International Monograph, Kent, Ohio, 1958.)

Charts XIII to XVI offer quantitative comparisons of the curricular programs in all three countries. The figures for German schools include only grades VI-VIII for proper comparability with France and Italy. To make the charts more readable, certain subjects have been combined: mathematics and science, history and geography, etc. Chart XIII presents a survey of the entire curricula of the three countries' middle level. What is perhaps most striking is the difference in weekly school hours in the countries. All types of German schools include considerably more school hours than do the French or Italian schools. (The same holds true for school weeks per year: The German school year includes more instructional days than the French and Italian systems.) Certain inferences and questions arise from these differences:

1. German pupils have more hours of "exposure" to teachers than their French and Italian counterparts. Do they learn more? Are the methods of teaching very different? Do the standards of achievement differ?

2. Assumed that achievement standards are similar, at least in

the more comparable three-branch systems of France and Germany, the French pupils are apparently expected to learn more "on their own."

3. In France, the instructional hours in academic branches are fewer than in the less academic branches, while the opposite is true in Germany. This may be based on French expectations that abler students should study more on their own, through homework. A corroborating fact may be added: French _lycée_ teachers do not get training in teaching methods but concentrate entirely on studies of their subjects like university teachers.

4. The German school systems either must employ considerably more teachers proportionate to the population than do France or Italy, or they must put heavier work loads on the teachers than the other countries do. As a matter of fact, the French _professeur de lycée_ normally teaches less than eighteen hours a week, whereas the German _Gymnasium_ teachers carry a weekly load of between eighteen and twenty-three instructional hours, depending on seniority. Class sizes on the lower secondary level are very large in both countries: rarely less than thirty and usually near forty or more.

5. In France, the sharpest difference appears to be between the curricula of the non-academic and the semi-academic programs; in Germany these two programs are more similar, and the sharpest difference lies between the semi-academic and the fully academic programs, in that much time is given to foreign language studies in the latter and to practical work in the former.

6. Physical education and music are assigned more time in all German school types than in Italian and French schools (except for physical education in French non-academic schools).

Chart IX contains three-year percentages of time allotted to subject combinations based on the total hours for the three years in each school type, as indicated in the lowest horizontal line. Concerning the subject, "national language," it appears that all French and Italian school types devote a larger proportion of school hours to its study than do all German school types. To social studies, all French schools allot less time than do the German and Italian schools. Mathematics and sciences--interesting to note--are given a smaller proportion of time in the academic schools (especially in the classical branches) than in the less academic schools in all three countries. Foreign langugages clearly stand out as the chief indicator of differences in the program patterns of the various school types. In the classical schools they absorb about one-third of the school time. Of interest are also the proportions assigned to non-academic subjects (see the next-to-lowest of the horizontal lines). As may be expected, the non-academic schools in the three countries devote more time to these subjects (more than 37 per cent in France and Germany) than do the academic schools. But the German semi-academic school (the Realschule) sharply differs in this aspect from its French counterpart; the latter hardly leaves more time to these subjects than do the lycée branches.

Chart XV is a graphic picture of the total hours allotted (in grades VI, VII, and VIII) to the academic subject groupings in the three countries.[104] The differences here are less pronounced than on Chart XIII, which means that the non-academic subjects account to a higher degree for the national differences in total school time than do the academic subjects. Yet the different subject emphases are clearly visible. To all subject fields the German schools assign more instructional time than the French and Italian schools, except to the national language, German. Noteworthy is also the relative similarity in program patterns between the Italian scuola media and the French semi-academic branch (collège d'enseignement général). The sharpest contrast between national patterns is clearly noticeable in the French and the German classical curricula.

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[104] The French non-academic schools are omitted in this chart because their different and rather unfixed subject combinations could not well be coordinated with the general schema: e.g., music and art are included in French, practical work is included in social studies.

Chart XVI compares the national pattern in each of the three school types as to their distribution of academic vs. non-academic subjects, indicated for each grade. (For the non-academic schools in France see the preceding footnote.) Here, the columns again differ more sharply due to the inclusion of non-academic subjects (music, art, physical education, manual work). In the latter, the French schools provide less instructional time. It is interesting to observe the middle position that the Italian scuola media is holding among all the school types in the three countries. It aims to serve the nation's entire school population (of the age level concerned), and its program seems to balance the various patterns of continental European school types.

CONCLUSION

SUMMARY

Nature and Objectives of Curriculum Revisions

During the mid-1960's, the school authorities of France, West Germany, and Italy issued new curriculum plans for the middle level, which has been the focus of the structural school reforms in these countries. The new plans do not reflect changes in the basic characteristics of European school curricula: they maintain the system of uniform ministerial directives and guidelines for the subject programs (syllabi) in each grade. With regard to methods of instruction, the teachers - as before - are free to choose their own approach, but the official guidelines of the 1960's contain more numerous and detailed recommendations (than earlier versions did) on modern ways of teaching.

The curriculum for each school type is designed as an integrated pattern from the first to the last grade. This system prevails in order to provide educational programs that are balanced and consistent with the schools' objectives. It avoids unintentioned repetitions or omissions in a student's progressive learning. The subjects are generally carried through - in smaller or larger portions - from year to year; rarely are they treated, as is done in the U.S., as self-contained annual courses. Electives, in the American sense, are not included in the curricula for the middle level (grades 6 - 8), but there continues to exist a differentiation of programs by school type (in Germany) or branch (in France). Italy's new scuola media has a unified program for all children, yet includes in grade 8 two alternative electives (Latin and Manual work) for children of different abilities.

In planning and revising the curriculum, the education ministries of the three countries use different procedures: France and Italy do not seem to involve teachers or persons outside education who have a stake in the work of the schools. But the West German Länder ministries do consult with classroom teachers, interest groups, and sometimes parents to varying degrees. (Hesse goes farthest in that direction by submitting all major plans to its Land Council of Parents.)

The social motives that guided the structural reforms of the early 1960's in the three countries are clearly evident also in the subsequent curriculum revisions. The desired and needed increase of students who would complete advanced secondary and - proportionally - higher education called for a reduction of the sharp cleavage between elementary and secondary education. To this end, the new middle level programs include these new policies:

a) An "observation stage" (grades 6 and 7) in France and, in principle but less overtly, also in the German Länder (grades 5 - 7) for the purpose of offering extended chances of transition to academic schools.

b) Greater similarity in the syllabi of the fully academic, the semi-academic, and the non-academic schools (or school branches) in France and Germany. Italy has gone farthest in this direction with its unified scuola media that has only one differentiating feature: Latin or manual work during the last of the three school years. The German Länder continue to separate the children in the three school types from the 5th grade on (except Berlin with its 6 years of common school), and they show the least degree of similarity in programs. France holds the middle ground with its plans of unified programs (in different school branches); but broad implementation of the scheme will take years. At present nearly half of the French children are not yet in schools that can offer the new (secondary) programs. The same is true in Italy.

(c) "Try-out opportunities" for the benefit of pupils whose future school careers are undecided because their abilities are not obvious or because their parents are indifferent. The try-out opportunities center primarily on foreign language: Latin is first introduced informally in the context of the mother tongue for one trimester in the French system, for a whole school year in the Italian system. In the German _Hauptschule_ (non-academic), the recently established pattern of more advanced "Kurse" in major subjects, supplementary to the required core of the program, is somewhat comparable; the students' performances in these courses may lead to higher educational aspirations for some pupils whose parents had not thought of sending them to a _Gymnasium_ or a _Realschule_ after the 4th grade.

Social, economic, and cultural considerations are behind a major goal that had a great impact on the curriculum of the middle level, namely, the general upgrading of school programs for the masses of children who merely complete the minimum of compulsory schooling. Italy has set the most ambitious standards for "mass education," since the _scuola media_ clearly bears the character of secondary, not elementary education. On the other hand, Italy is still far from general compliance with compulsory education (up to age 14), and has to provide more facilities for full enrollments in the _scuola media_. France, too, has established the principle of offering at least the first two years of the academic secondary program - but minus the foreign language - to all children of non-academic aspirations, in the "classes de transition"; the government has incorporated in its economic plans concrete steps for the gradual implementation of the new system.- The German Länder have set less ambitious goals that seem easier to implement. The upper part of elementary schools (grades 5 - 9) has been given an "up-graded" program of secondary education, but this is still largely oriented on practical aspects of daily life. A foreign language is - or soon will be - available to all children in these schools. An essential advance toward the improvement of school programs is the gradual consolidation of small rural schools, a problem facing also the other two countries.

Novel Features of Instruction on the Middle Level

The conversion of upper elementary into lower secondary education involves more than a change of course programs. It includes "departmentalized" instruction by teachers with specialized training in a subject; it also envisions a style of teaching that develops the children's power of thinking, leading from perception of concrete phenomena to conceptions of qualities, relations, and structure. This aim is an important departure from tradition which held repetitive drill in basic skills and a modest addition of factual knowledge sufficient for rural and working class children. All major curriculum reform plans refer to the need of modern society to have all young citizens develop their intellectual powers in the best possible way.

Last, but not least, the upgrading of popular education has included the abolition of vocational preparation from any program on the middle level, that is to say, within the span of compulsory education. This concerns only France and Italy, where vocational training formed part of the non-academic public school programs usually from grade 7 on (in France in the centres d'apprentissage.) Germany did not have this feature; vocational training always started after completion of an 8-year general education.

The reforms in structure and programs for the middle grades have led to new emphases also in the teaching of academic classes. These modifications of traditional styles will take time to be realized in practice. What presently matters is the explicit commitment to modern teaching approaches on the part of the ministerial departments for secondary education in the three countries. The lecture method and the "book-and-chalk" approach are officially rejected as dominant methods of teaching. Instead, the "inductive approach," pupil activity, class discussions, group work, investigation and even experimentation by students are amply explained and recommended in the ministerial guidelines. The influence of John Dewey or comparable European progressive educators is apparent but not mentioned in any of the documents.

In Italy and France, the switch to these modern teaching methods is the more difficult as secondary school teachers have no basic training in methods. In both countries, the ministries have, in recent years, established study centers for didactics and the preparation of suitable teaching materials; they also conduct in-service training and conferences. In both countries, the effort to modernize instruction is limited to the middle level, while the upper secondary classes continue in the traditional style.

In Germany, the modern emphases in secondary instruction are less reminiscent of "progressive education" but resemble - to a degree - the present American concerns with curriculum and instruction: they center on judicious selectivity in subject content, and especially recommend the use of model cases to teach generalizations and concepts (in German: "exemplarisches Lernen").

Team teaching and programmed instruction have not yet entered the curriculum of public schools in the countries examined. But experiments with programmed instruction have ministerial support in all three. They are more amply found in Germany than in France or Italy. One field in which (in German Länder) the use of up-to-date methods and technical aids seems most advanced is that of modern foreign languages; imaginative approaches and laboratory equipment are increasingly employed in the language courses.

Program Revisions in Individual Subjects

Course programs have changed more drastically in Italy's new scuola media than in the corresponding classes of French and German schools. Moreover, the Italian ministerial plans and guidelines leave greater flexibility and responsibility to the teacher in structuring his own design of content coverage. Both these facts are obviously related to the still experimental character of the unified school. (See, for example, the novel combination of Italian-Latin and the introduction of science, hitherto not taught at this school).

The syllabi for the instruction in the national language show the typical differences in the degree of prescribed requirements: In Italy, reading materials are broadly suggested, the teacher has to make his own selections (usually chosen from an anthology). For French classes on the same level, only teachers in non-academic classes are accorded this degree of latitude. For the academic and semi-academic classes, the reading materials (mainly from classical literature) are specified in detail, with a few alternative choices. In Germany, the guidelines present lists from which the teacher must choose a certain number and is expected to add his own (or the pupils') selections.- France places the greatest emphasis on formal training in the style of linguistic expression, in addition to regular "explications du texte" in the traditional manner. The Italian and German directives recommend quite contrasting practices in stressing the value of self-expression and imagination, with only minor differences in the provisions for the different German school types.

Foreign language studies continue to form the backbone of French and German academic curricula. The sequence of languages taught is the foremost criterion of differentiation among the types of secondary school programs.- Latin, still the language of greatest prestige,plays a greater role in France and Italy than in Germany. In Italy, however, Latin has ceased to dominate the scuola media. Of the French children entering academic secondary classes, many are enrolled in the classical branches which begin Latin and a modern language simultaneously. The Italian middle school now begins with a modern language and introduces Latin the following year. In Germany, a minority of academic students enters the classical Gymnasien where Latin is started from grade 5 on. Most students (enrolled in other Gymnasium types) begin with a modern language and add the second and third language (including Latin) in grades 7 and 9.

A significant innovation is the expansion of modern language offerings to much larger segments of the school population, a feature that helps to reduce the sharp differences between academic, semi-academic, and non-academic programs at least during the early stage of secondary education. Italy - in theory - plans to give all children this opportunity, since the _scuola media_ is designed to receive, at a future date, all children of the age group. The French plans do not include (in foreign language instruction) the lowest achievement group, which is expected to comprise 30 to 40%. The German plans made a modern language available in all _Hauptschulen_ (non-academic), with the usual prerequisite of at least average achievements in the mother tongue.

The social studies, while given much attention in the curriculum reforms of the three countries, occupy only a minor portion of instructional time, compared to American curriculum practices. The official guidelines present elaborate recommendations for the updating and broadening of approach in the teaching of history and geography, with the focus placed on the human and social aspects of the two subjects. Somewhat different accents mark the officially stated objectives of history teaching: in Germany the accent is on political education, in Italy, on socialization, in France, on humanist orientation.

Civic instruction has been added to the Italian curriculum by government decree in 1958; but it is taught on a very limited scale in the middle grades, as is also the case in France. The German _Länder_ concentrate on this subject in higher grade levels and have in most instances removed it from grades 5 and 6.- The content of civics programs varies considerably; in general, civic education does not seem to have progressed much beyond the experimental stage.

The recent historic past is treated quite differently in the three countries: The French schools offer contemporary history only in upper lycée classes. The German schools - after Federal initiative in this matter in 1959 - must teach all children (before their leaving school) the complete facts about the Nazi past. In Italy, the Fascist era is completely ignored in all school programs and official guidelines.

The mathematics programs for the middle level reflect few if any elements of the "new math" in France and Italy. The Germans have introduced considerable revisions of different kinds in the different school types. The Gymnasium programs - geared to train in abstract thought and concept formation - have been accelerated and enriched, with some features of the "new math" starting in grades 5 and 6. The Hauptschule programs, in comparison, stress the training in quantitative operations in the context of practical (or technical) life situations; they no longer demand exorbitant drill in mechanical number manipulations. Geometry is taught in similarly different fashion for the two school types: stressing the concrete approach in the Hauptschule, the formal abstract approach in the Gymnasium. The Realschule holds a middle position between the two styles, usually with closer affinity to the Hauptschule than to the Gymnasium.

The instruction in natural sciences reflects similarly graded approaches in the German school systems. In the Hauptschule the middle level grades venture into elementary physics and even chemistry rather early, through purely inductive studies of individual phenomena, while the Gymnasium starts systematic physics in grade 8 and chemistry two years later. Experiments by pupils are highly recommended. Biology (or nature studies) is taught in all grades of all schools.- Italy introduced science instruction in the scuola media as "studies in scientific observations." Formerly it was not taught before grade 11 of the liceo.- France continues its traditional science program (biology and geology on the middle level), but has introduced, as a separate subject, a course in " experimental scientific method." No content requirements are given for this course to leave the teachers free to experiment with new approaches and adapt to local conditions. As is done in other major subjects (but not in history and geography), the usually oversized classes are subdivided for part of the scheduled hours to enhance the opportunities for individual work and pupil activities.

The curricular programs as a whole show remarkable differences in the quantity and distribution of weekly instructional time. The more academic schools have a heavier schedule of school hours than the less academic schools in Germany, while in France the reverse is true: the lycée schedule includes fewer hours than that of other school branches (counting obviously on proportionately longer homework hours). The weekly Gymnasium schedules in some cases exceed 34 hours, with added hours for homework. A trend to reduce the overload of school work is reflected in the 1966 resolution of the German education ministers, who set the weekly maximum at 34 hours.

Italy's scuola media holds a medium position in quantity of weekly hours, and it also has the most balanced distribution of subject groups. German schools provide more instructional time than the other countries in all subjects except one: the national language (in this case German).

Evaluation

The recent curriculum revisions of the three major continental nations show the direction in which the Europeans are moving in implementing their versions of school provisions for modern society. All three systems started their reform process from very similar backgrounds: Common primary classes were followed by an essentially dual structure, consisting of terminal schools for the masses, with modest goals and limited programs, and schools for the social elite that were oriented on humanistic ideals and the preparation for university studies. Today, the primary school level in the three countries still shows much similarity in basic features (common attendance of all children, religious orientation in Italy and Germany, emphasis on child-oriented teaching in the better schools, inadequacy of small rural schools). The upper secondary school levels with their unquestioned academic objectives also have retained their essential character, except for minor modification of the terminal years in France and Germany.

However, on the middle level, the lower secondary stage, the three countries have embarked upon ventures that range from complete unification of school type and program (Italy) to the amplification of the former two-track to a three-track system of schools (Germany). And yet, these apparently diverse patterns have resulted from social and educational motives that are basically identical in the three countries. (See above)

Whether children of different abilities should, for the sake of democratic equality, attend the same school and follow the same programs not only on the primary but also on the secondary level is a question much debated throughout the Western world. The modern trend seems to favor an affirmative answer. (Examples: New York's recent re-emphasis of comprehensive high schools, the English comprehensive secondary schools, the Scandinavian post-war school reforms). But some differentiation of programs is usually begun on the 8th or 9th grade level.- Italy has undertaken the radical change-over to the common middle school in the form of a national political decision that now has to prove its educational merits. In France, too, the common lower secondary school (but with diversified branches) was politically decreed but with plans of more gradual implementation. West Germany, on the other hand, retained the less "democratic" parallel school types.

All three countries indicated the objective to replace the traditional upper-primary school style of education with an upgraded, secondary-school type education. France and Italy obviously regarded the transfer of upper-stage mass education to secondary school establishments as the best way of achieving this end. Germany instead has begun to upgrade and enrich this type of schooling at separate establishments (die Hauptschule). Three factors may explain the different courses of action. One is the level of teacher training. French and Italian elementary school teachers have less academic and professional training than their German counterparts.[105] If training is assumed to be related to teaching standards, it may seem more feasible to expect an upgraded, secondary-type instruction from German teachers assigned to Hauptschulen than may be expected from French or Italian elementary school teachers.

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[105] The traditional "normal school" education is still the prevalent form of preparation in France and Italy, while in Germany, future Volksschule (Grund- and Hauptschule) teachers need the full Abitur graduation, six or more semesters at a Pädagogische Hochschule, which may include regular university courses, e.g., in the major and minor subject of teaching, and usually one year of probationary work (Probe-Jahr), before they are certified. Certification rarely occurs before age 23.

The second factor concerns the past history of upper elementary education in the three countries. Before the 1950's, in France and Italy this school level (grades 6-8) was neither precisely structured nor widely attended. (Both countries also maintained semi-vocational schools at this level). Of those children who remained in the primary schools, many dropped out before having finished grade 8, either because they reached age 14 in some earlier grade (having repeated a grade once or twice), or they left to begin a form of job training if not paid work outright.- The official guidelines in both countries indicated merely broad program suggestions for instruction in these terminal classes, mainly stressing the three R's.[106] In contrast, the German upper Volksschule classes (grades 5-8), now Hauptschule, included all children not enrolled in Gymnasium or Realschule. Earlier leaving for job training or work was not possible before completion of eight years in school, and about 75% of the pupils completed grade 8. There were progressively structured curriculum programs - including elements of science, history, geography and physics - on which the present Hauptschule programs could readily be built. -

The third factor is related to basic conceptions of school design (discussed in chapter II). The German authorities still view the schools and their basic purposes in the light of future work functions which the children may later perform on the basis of their abilities (theoretical-professional, technical-commercial-administrative, practical). These outdated artificial constructs of an occupational spectrum meet with growing opposition among modern-minded Germans, especially social scientists, but they are still used in official declarations and school guidelines. The French documents also refer to different levels of work in explaining the different characteristics of instruction, but such occupational considerations enter only subsequent to the observation stage (grades 6-7). For the observation stage, the justification given for the differences in program and teaching approach is only the variation in ability and interest of the students. The designers of the observation stage intended to create a phase of suspended career planning, where the school acts as a neutral catalyst for the child's potential talents and interests. The evidence of achievements and interests should then - in theory - lead the parents to more soundly based career decisions for their children. The Italian reform plans and policy statements make no reference to future occupational functions, but stress the factors of social equality and development of abilities.

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[106] In a reprint of the French elementary school syllabus of 1965 the commentator deplores the absence of program definition for the "fin d'études" classes. See M.Lebettre and Vernay, Programmes et instructions commentées. Enseignement élémentaire (I^{er} degré). Paris: Librairie A.Colin, 1965,

A major objective of all the reforms in school structure and programs is that of attracting larger segments of the abler students to proceed toward advanced education. Students who were not enrolled at the regular points of transition should have broader chances of later transfer from the less academic school types. The Italian system has all but eliminated this problem for the middle level by offering all children the same curriculum. The French and German adjustments toward greater similarity in programs of the parallel school tracks will ease the belated transfer of students. The French system has even introduced special reception classes, called "classes d'accueil", for such students. The German Länder have begun to offer free after-school help with homework and tutoring given by teachers (for additional salary) to children who have difficulty adjusting to the Gymnasium. In effect, all three countries have rising percentages of initial enrollments in academic classes or schools. This progress can be largely attributed to the school authorities' "open-door policy" . But the statistics also show a considerable rate of failures and drop-outs during the early years of academic training, aside from " non-enrollment" cases of talented children.[107]

A major cause of this situation must still be sought in the nature of the academic curriculum. Its undiminished heavy demands in foreign language studies are keeping out or screening out able but linguistically " disadvantaged" children from lower social strata. The new plans continue to require that every seventh- and eigth-grader enrolled in an academic class must cope with two foreign languages. It seems astonishing that not any of the curriculum revisions for the middle level have provided opportunities for an early academic training that emphasizes mathematics and sciences and leaves a heavier language program for later years. Although the adherence to the preferential treatment of languages over sciences must be assumed to work against the objective of equalizing the social chances for advanced education, no evidence of attempts to modify the deep-rooted tradition was found in the official statements and guidelines.

Not only in the light of the social reform objectives, but also if assessed in view of the proclaimed intellectual goals of emphasizing the training in scientific thought and knowledge,[108] the curriculum revisions appear wanting in consistency. While it is true that all the new plans and guidelines mention the importance of training in reasoning, in "scientific method" , in critical assessment of hypotheses, there has apparently been no major reexamination of content matter (that would include the programs of the preceding and the subsequent stages of schooling) in the traditional subjects. The new program directives advocate concentration on essentials of content and - especially in Germany - the use of exemplary paradigms. But it is mainly through modernization of *methods* that the new objectives are expected to be attained. This is most clearly apparent in the Italian and French guidelines. In some subjects, the traditional schemes seem entirely unchanged; for example, the French programs for the native language and literature in grades 6 and 7, now expanded as norms for *all* observation classes, are the same as those formerly applied only to the *lycée* classes.

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[107] The German problems in this respect have been cogently discussed by Ralf Dahrendorf in Bildung ist Bürgerrecht, Hamburg, Nannen-Verlag, 1965, p. 80ff.

The feature that is most consistent with the goal of teaching scientific method is the novel course in "scientific experimental work" (France) or "scientific observations" (Italy). But the brief time allotted to it in the schedule as well as its separation from the ordinary science courses raise doubts about an effective modernization of the schools' science teaching program as a whole.

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[108] In a recent policy statement, these goals were emphasized by a high French educational official, Marcel Leherpeux, who stated "the intellectualization of the life of society will represent one of the most noticeable transformations of the human condition in the last third of the 20th century" . In "L'enseignement français aujourd'hui", Essai d'Explication de la Situation présente. Collection Etudes et Rapports, March 1966.

The treatment of the social science subjects invites somewhat parallel comments. The importance accorded, in the broad declarations of objectives, to stronger foundations for understanding of modern society in political, historical, and geographic contexts does not appear properly reflected in the program designs or in the time allocated for these studies. For example, the new civics courses in France and Italy seem little more than a gesture in the desired direction: what effects can be expected from courses allotted a half or one hour a week? On the other hand, the new recommendations for methods and approach in handling the content seem to respond more closely to the new general objectives.

The present disparity between emphases on modern methods and the limited modernization of instructional content is understandable in as much as the middle level reforms mainly focus on the adaptation of broader strata of children than ever before to the existing academic programs. Major changes in curriculum content, however, face the dilemma of either waiting till the upper academic schools (lycee, Gymnasium, liceo) are ready for coordinated reforms (which do not seem imminent), or advancing independently at the peril of even greater antagonism on the part of the academic community than already exists. A discrepancy in programs could also be a disservice, especially to the children from less favorable family background who traditionally have had difficulty bridging the gap between primary and secondary education.- In the three countries, the first alternative prevails, although in Italy the inroads on the preeminence of Latin and the novel addition of science represented a sort of "declaration of independence" from the academic establishment, which reacted with eloquent protest.

Concluding Thoughts

This study of the characteristics and recent developments in the curricula of French, West German, and Italian schools has assessed the official policies and designs of programs and schedules. The main purpose was to acquaint American educators with what the European school authorities consider good school programs, and with the directions in which the authorities are moving to adjust the schools to the needs of modern society. In other words, the focus is on the aims and the broad characteristics of the instructional plans; it is neither on the practical reality of the classroom nor on the many ways of implementing the official plans. A careful reading of the directives and guidelines, however, reveals glimpses of the reality and the problems that teachers face, especially when explicit warnings of outmoded practices or strong suggestions regarding desired emphases are expressed in the documents.

In view of the limitation of this project to the middle grades of the school systems concerned, it would be improper to draw conclusions from it about the total curricula in these national systems. Much of the excellent work for which Americans usually respect the European schools goes on in the upper grades of secondary schools where the student body represents a select number of able and often hard-working young people. To obtain a complete picture of the present curriculum developments, three additional research projects ought to be undertaken. One should cover the primary schools,[109] another the upper academic and semi-academic levels, and a third should examine the programs of terminal classes for the many young people who, after completing compulsory schooling, enter the work force or vocational training programs. During the past few years, in France and West Germany (as also in some north European countries) much thoughtful planning and experimentation, usually in consultation with industry and labor, has gone into designing meaningful school programs for the recently added ninth (and in some cases tenth) year of general education. The resulting patterns and experiences might prove interesting and perhaps useful for American curriculum planners.

Further research should concentrate entirely on the many experiments and novel features that are not part of the general curriculum patterns. It was not feasible to include these experiments in the present report. Numerous school experiments are devoted to novel instructional patterns, others to compensatory programs for underprivileged children, some to all-day school schedules, and some to fully comprehensive schools (for example, in Berlin and Hesse). These experiments usually have the full support of the school authorities, provided the procedures are handled in responsible manner, and the financial demands remain within acceptable limits. (In the German Länder, the communities are sometimes expected to bear part of the costs.)

All in all, the interviews with ministerial officials in the three countries have given the impression that the era of enforced conformity to traditional ways - long regarded typical of centralized control over the schools - has passed or is passing.

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[109] This project could build on the excellent study by the Swiss scholar, Professor Robert Dottrens, The Primary School Curriculum, a UNESCO Monograph of 1962, which includes school data from nearly 60 countries.

Some of the curriculum innovations in the present plans indeed have a background of years of experimentation. For example, the French _classes d'observation_ (grades 6 and 7) have inherited major features from the _classes pilotes_ of the 1940's and '50's: The emphasis on pupils' individual work under guidance in classes of reduced size, the stress on the "active method" and the inductive approach that has even led to the introduction of a course purely devoted to training in experimental scientific method.- Examples in Italy include the work of the _Centro Didattico per la Scuola Media_ (and the other didactic centers) during the 1950's, which invited and supported the efforts of teachers devoted to modern approaches, [illegible] the concept of "child-centered teaching" and as in France the"active" and inductive method in classroom teaching.- In Germany, experimentation during the 1940's and '50's with a "differentiated middle level," especially carried on in Lower Saxony, preceded the now nationwide introduction of elective courses - graded for different ability levels - that supplement and enrich the common core of subjects in the _Hauptschule_.

The earlier experiments and their positive results were, of course, no guarantee for success when they were translated into broad-scale innovations in the entire school system. The problem hinges on nothing as much as on the teachers' competence and their support of the innovations. If the mass of teachers, when confronted with novel designs and instructional guidelines, is not adequately prepared and persuaded to follow the new paths, the results are bound to be doubtful and may discredit the good designs. This is presently a major problem in Italy with its most radical departure from the traditional middle level schools.

Teachers and principals of the old scuola d'avviamento are dismayed over the demise of this school to which their careers were geared and which many considered more useful for children from poor families than the new middle school. The old scuola media professori deplore the mixing and "watering down" of standards in the new school set-up. The combining of staff from both school types in the new common school represents a problem in itself. Numerous in-service courses, supplementary license examinations, and ample teaching materials are provided by the ministry in coping with the problem of adequate staffing for the new scuola media.

France too is facing the problem of not having sufficient teachers who are trained to master their expanded responsibilities in guidance and modern teaching techniques in the observation classes. But the deviation from past practices is less drastic in this case, and the transition more gradual, perhaps even too slow (in the view of some observers) for a growth of "élan vital" for the novel practices. The traditional "grands lycées" - the highly renowned old schools in Paris - have as yet barely been touched by the reforms on the middle level.

The ministry of education goes to some length in securing the cooperation of teachers. For example, appointments to positions in (comprehensive) collèges d'enseignement secondaire are made on a voluntary basis. When the added duties of essential reform features involve extra time, such as the regular meetings of the "class councils" (comprising all staff members who deal with a particular class), the school authorities give out special payment for the required attendance.

In Germany, the severe teacher shortage on the elementary level is in itself a factor that impairs the progress in reforms, e.g., the addition of a ninth year in the Hauptschulen. And the introduction of English in all Hauptschulen naturally depends on the supply of sufficient teachers trained and certified to teach that subject.

The modern methods advocated in the new guidelines represent less problems in German teaching practices, which had been more affected (than the French and Italian systems) by the "progressive education" concepts since the 1920's. The recent minor curriculum revisions, with their focus on streamlining the mass of content, on teaching through exemplars and emphasizing structure, are bound to be generally accepted by the teachers even if the latter may not all be capable of mastering the proposed approaches.

The new features outlined in the ministerial directives are elements of what the Germans call "innere Schulreform," in contrast to organizational changes which belong to the "outer school reform." While the latter has met with broad opposition by conservative forces throughout the post-war decades, the "inner reform" of the schools was advocated by all sides. But there was, of course, little agreement on, and clarity of, the goals, directives, and criteria of the desired changes, beyond the general claim that the schools should be more democratic, more effective, and more coordinated in their programs. The changes recently introduced have not provoked opposition among conservatives, except for some rural communities which resist the consolidation of tiny village schools into central Hauptschulen.[110]

Still, the small advances now underway can hardly assuage the widespread discontent with the schools, a characteristic public phenomenon in Germany since the end of World War II. Aside from the popular opinion that the schools are not doing their job properly, the more profound critics point to the basic inadequacy of the structure and programs in view of the present and future conditions of life in modern society. These critics, which include some of the country's most knowledgeable scholars in education and the social sciences,[111] call for a total reassessment of the functions of the schools today and, starting from there, imaginative new patterns of programs and teaching approaches within an elastic, comprehensive, diversified system of public education.

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[110] Even the Catholic circles which formerly opposed this change have now generally come to support the rural school reform, after statistical evidence showed the "educational lag" of Catholics compared to Protestants in Germany. See Karl Erlinghagen, S.J., Katholisches Bildungsdefizit in Deutschland. Freiburg: Herder, 1965.

[111] Such as Walter Schultze, Saul Robinsohn, Hartmut von Hentig, Ralf Dahrendorf (sociologist), and Friedrich Edding (economist)

None of the Land ministries of education has come forth with any reform approaching such far-reaching modernization. In fact, the latest Declaration of the Conference of Education Ministers (in July, 1966) on the Gymnasium programs reaffirmed the traditional structure and curriculum, while outlining agreed-upon (and familiar) sequences of subjects, based largely on the unquestioned theories of child development and the equally unquestioned "Bildungsgut" (content of school subjects). Modern elements were confined to the suggested methods and to didactics. There is one design, however, that reflects a broad, radical approach: the draft of the Berlin school authority, an unpublished working paper for the committee preparing long-range plans for school reform (See above, Ch. IV). The future will show its progress.

The situation in France and Italy is not different in this respect. Neither of them has begun to undertake a comprehensive modernization of the public school system. For socio-political reasons, the opportunities for access to advanced schooling were broadened and terminal mass education will be improved. But in both countries, the new measures amount, in essence, to an extension of traditional academic school programs to more children than before, with some adjustments and more emphasis on modern teaching methods.

In broad perspective, the revisions and reforms of the middle level curriculum in the three countries here examined do, no doubt, represent the most advanced steps in the slow process of updating the school systems. Their value goes beyond the social (and economic) benefits for which they were designed. They are engendering wide-spread occupation, in thought and practice, with new teaching approaches. Above all, they lead numerous educators to critical assessment of their work and to experimentation within the sanctions of the system. They habituate teachers to the need of in-service training. They bring school issues to the public forum, thus acting as catalysts for popular interest in education. And they force the notoriously rigid school administrations to cope with change and improvisations.

Some of these overt effects will be quite positive. On the other hand, there are some negative results which tend to discredit the reform enterprise as a whole. These are largely caused by age-old shortcomings in the planning and implementing of school provisions: besides insufficient teacher preparation it is mainly the lack of factual information gained from research. Too little is known about the workings of the schools, about the efficacy of teaching methods, and, basically, about the whole complex of what should today be taught in the schools. Empirical research in education is still in its infancy. The universities in the three countries are not producing factual research in education. But some valuable contributions in this area have been made in recent years by the Institute for International Pedagogical Research in Frankfurt and the Max Planck Institute for Educational Research in Berlin, both well staffed and soundly financed. At the latter, a long-range project, guided by Professor Saul Robinsohn, is presently underway: a comprehensive study of curriculum design, based on theory and empirical assessments. The findings should be of great interest to future planning of school programs. Other significant research contributions are the International Achievement Testing Projects sponsored by the UNESCO Institute for Education in Hamburg.[112]

To what use the recognitions from factual evidence will be put remains a matter of political decisions. As the recent decades have shown, the impetus for reforms can no longer (as in the '20's and '30's) arise from the professional educators; the school has become too much of a politicum today. In the European systems, it is the governments, and lastly the public, that need to be persuaded that truly modern schools are a necessity in our times. It falls to the pedagogues to do much of the groundwork and of the persuading. They bear the chief burden in implementing the changes and adjusting their own daily work according to the officially adopted plans. In this light, the present revisions of the middle level curriculum are test cases for further, more complex reforms. From their successes and failures, the educators, governments and public alike may learn how better to proceed in the arduous task of updating the work of their schools.

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[112] The most recent study, International Study of Achievement in Mathematics, based on data gathered in 12 nations, will soon be published in two volumes by John Wiley, New York.

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Note.

Countless reports and articles have been published in the three countries on the recent reforms, modern teaching methods and experimental features. A complete bibliography with annotations could constitute a project in itself. The selection here presented merely serves to illustrate the variety of topics discussed. For the present study, particular use was made of those periodicals which are published under official auspices: In France, *L'Education Nationale*, *Le Courrier de la Recherche Pédagogique* (published by Institut Pédagogique Nationale); in Italy, *La Scuola Media e i Suoi Problemi*, *Ricerche Didattiche* (published by Centro Didattico per la Scuola Media); in Germany, *Bildung und Erziehung* (published by Inter Nationes, Bonn - Bad Godesberg.

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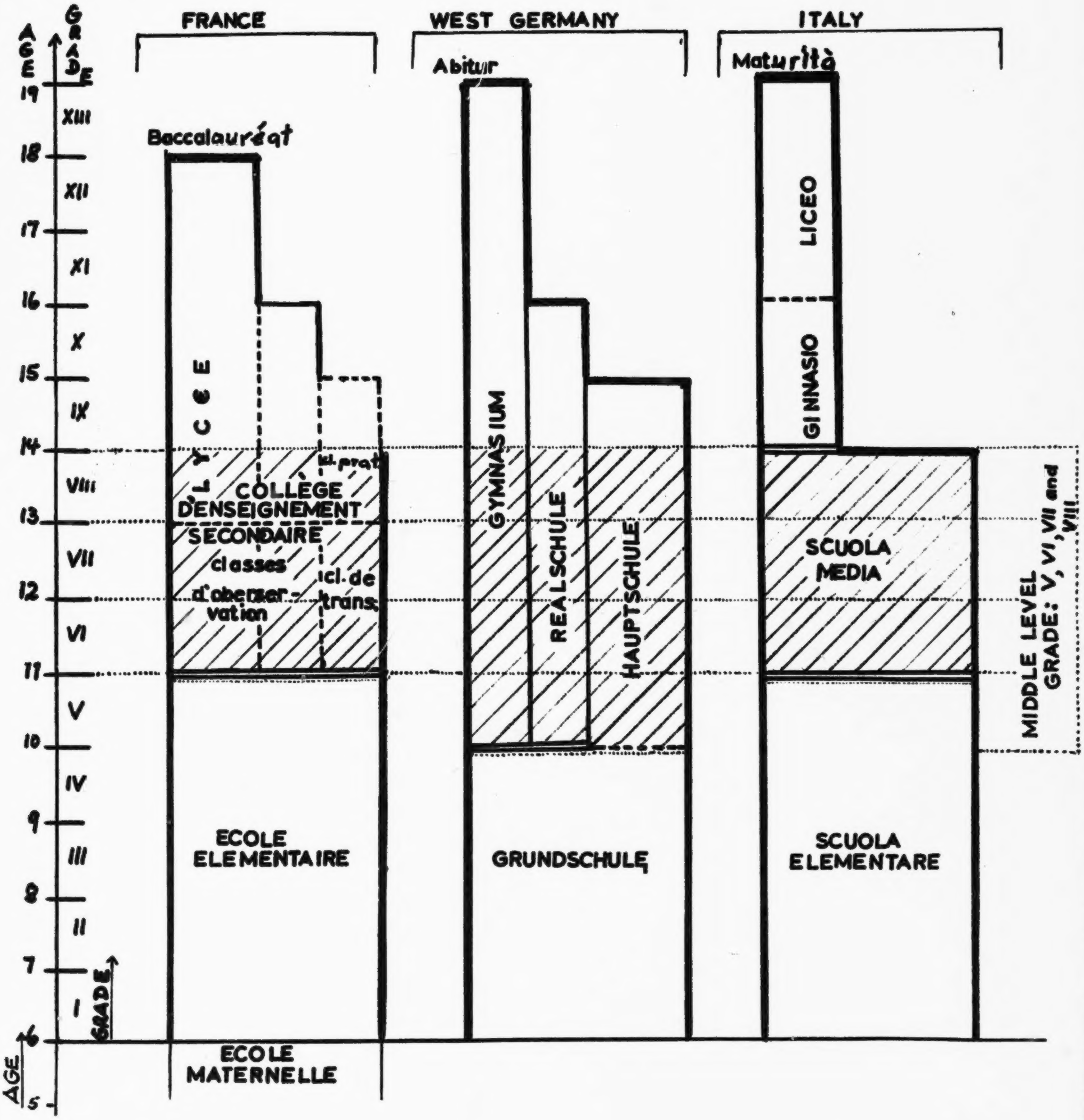
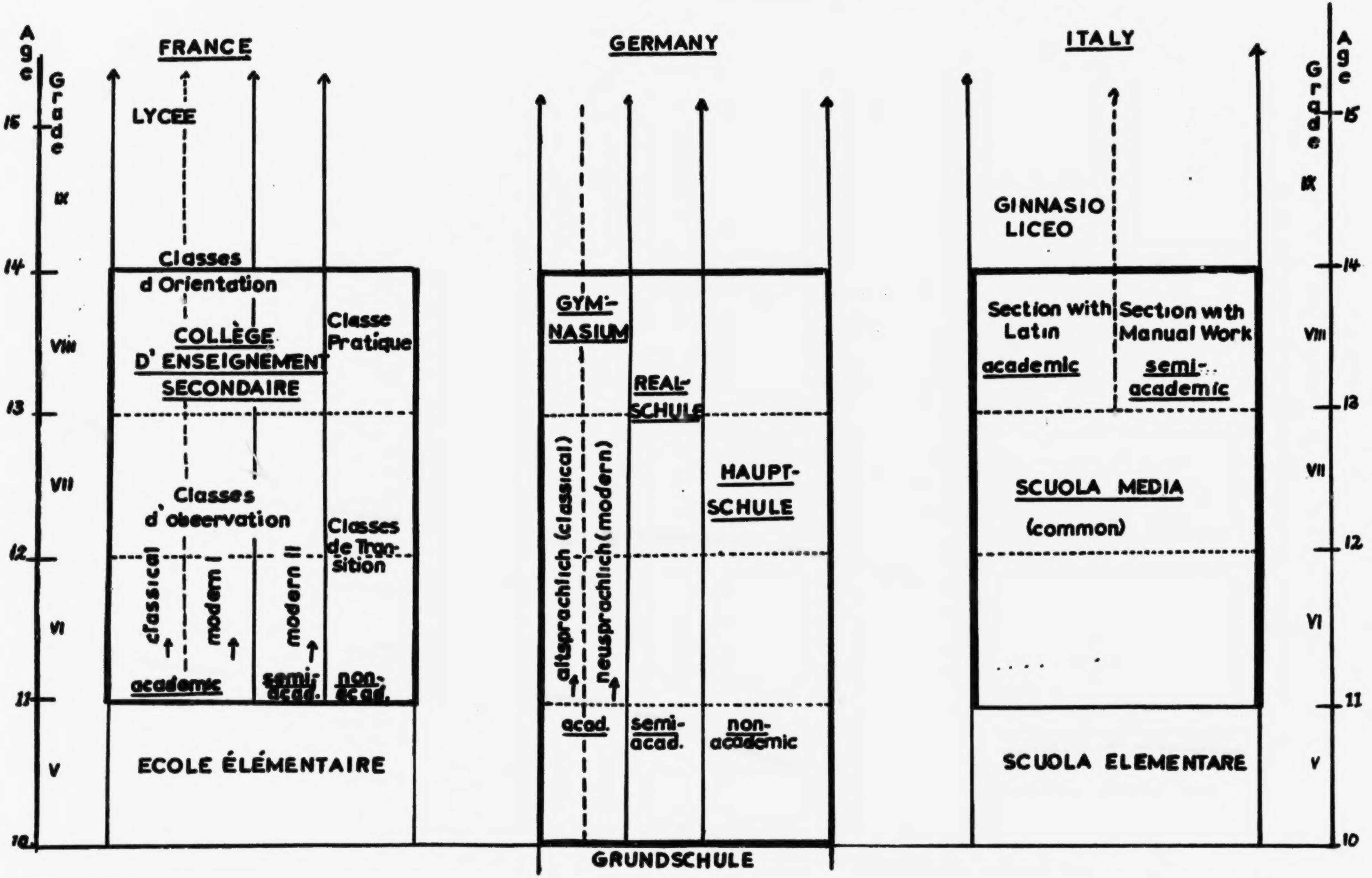
I. TOTAL STRUCTURE OF THE SCHOOL SYSTEMS

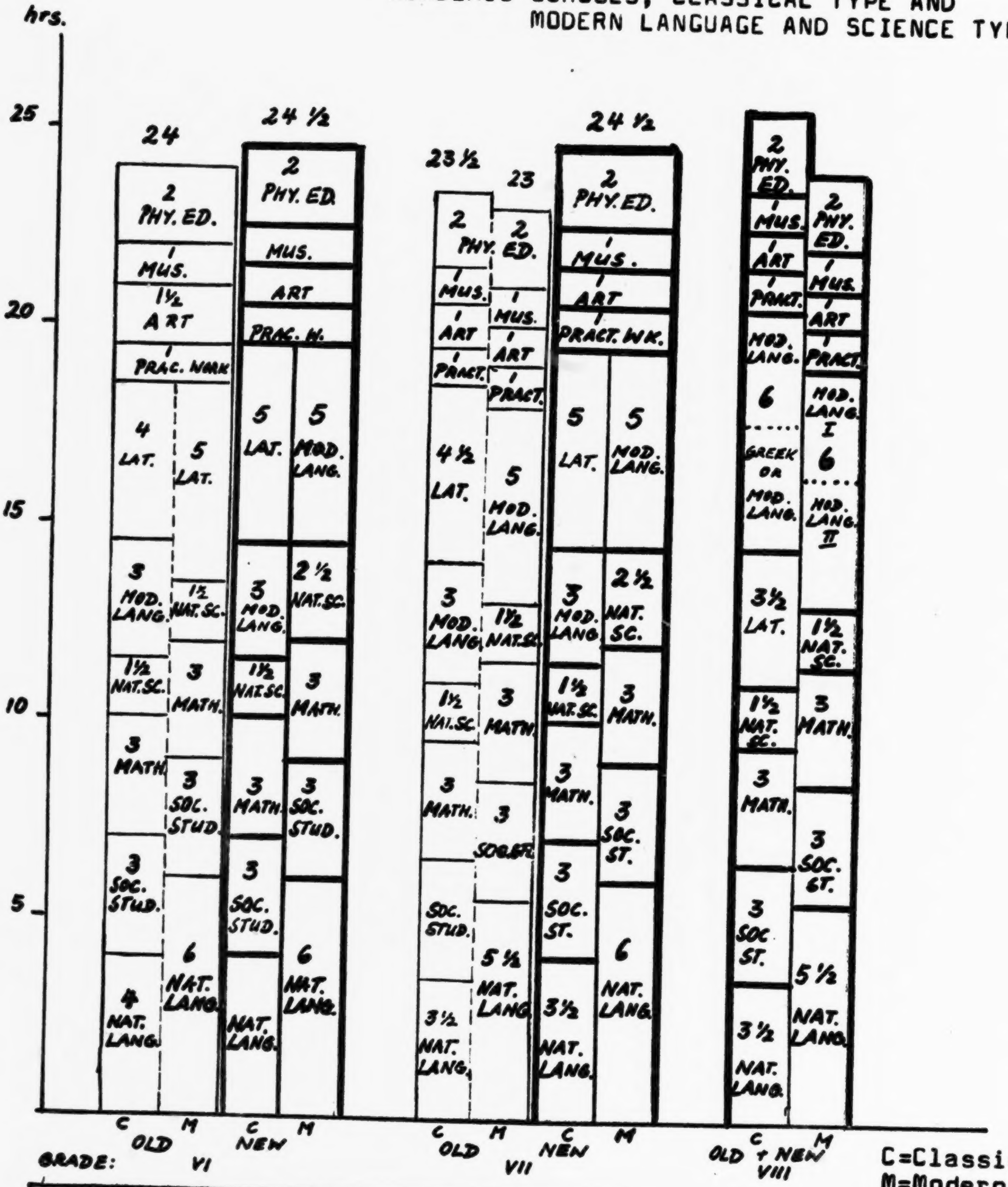

FRANCE
WEST GERMANY
ITALY
AGE
GRADE
19
XIII
18
XII
17
XI
16
X
15
IX
14
VIII
13
VII
12
VI
11
V
10
IV
9
III
8
II
7
I
6
5
GRADE
AGE
Baccalauréat
LYCEE
COLLÈGE D'ENSEIGNEMENT SECONDAIRE
cl. prat
classes d'observation
cl. de trans.
ECOLE ELEMENTAIRE
ECOLE MATERNELLE
Abitur
GYMNASIUM
REALSCHULE
HAUPTSCHULE
GRUNDSCHULE
Maturità
LICEO
GINNASIO
SCUOLA MEDIA
SCUOLA ELEMENTARE
MIDDLE LEVEL GRADE: V, VI, VII and VIII

II. THE MIDDLE LEVEL – STRUCTURE AND TERMINOLOGY


Age
Grade
15
14
13
12
11
10
IX
VIII
VII
VI
V
FRANCE
LYCEE
Classes d Orientation
COLLÈGE D' ENSEIGNEMENT SECONDAIRE
Classe Pratique
Classes d'observation
Classes de Transition
classical
modern I
modern II
academic
semi-acad.
non-acad.
ECOLE ÉLÉMENTAIRE
GERMANY
GYM-NASIUM
REAL-SCHULE
HAUPT-SCHULE
altsprachlich (classical)
neusprachlich (modern)
acad.
semi-acad.
non-academic
GRUNDSCHULE
ITALY
GINNASIO LICEO
Section with Latin
academic
Section with Manual Work
semi-academic
SCUOLA MEDIA
(common)
SCUOLA ELEMENTARE

III. FRANCE, CURRICULUM DEVELOPMENT 1958/9 - 1965

ACADEMIC SCHOOLS, CLASSICAL TYPE AND
MODERN LANGUAGE AND SCIENCE TYPE

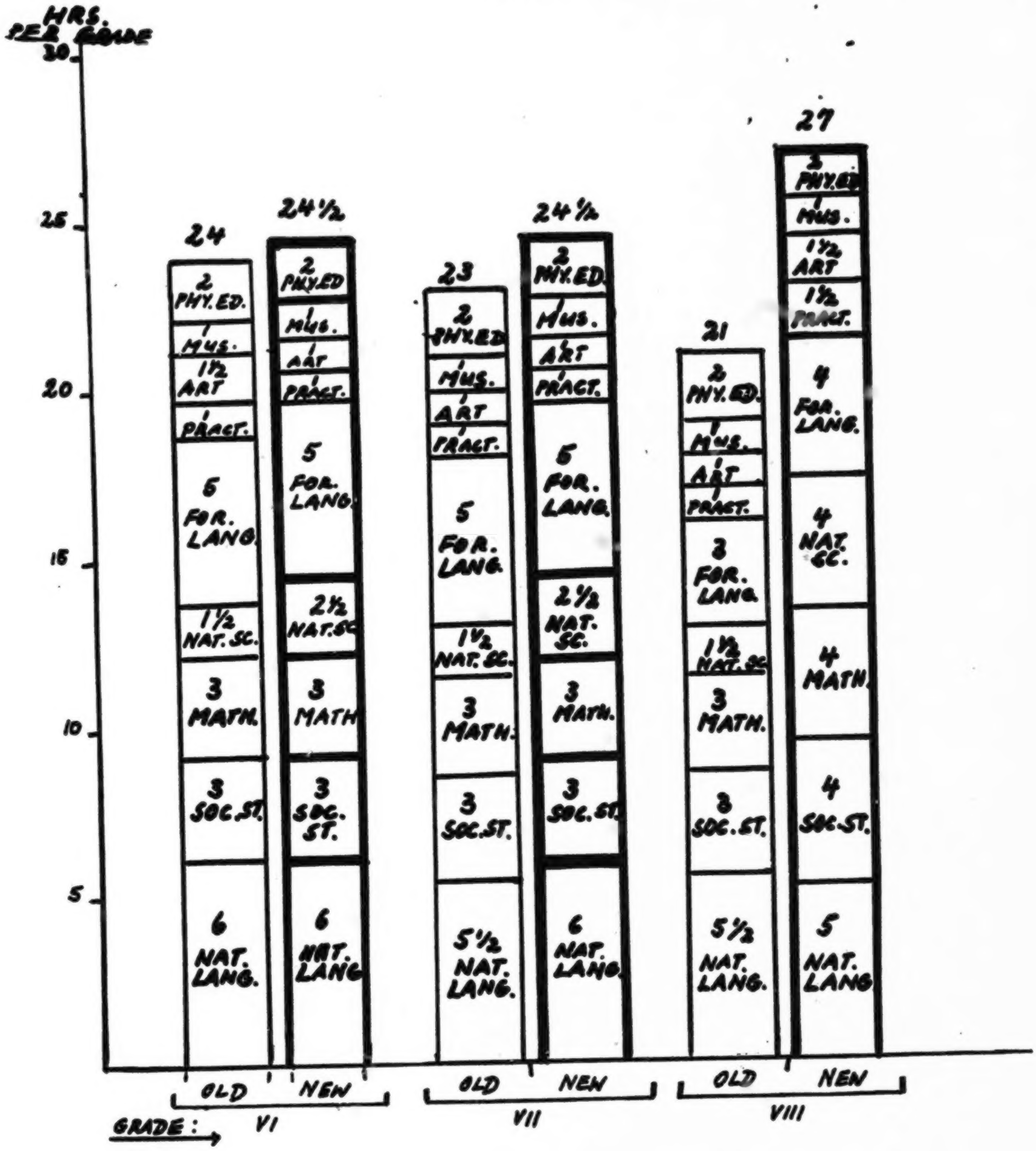


C=Classical
M=Modern Language...

ACADEMIC SCHOOLS: TYPE →	TOTAL HOURS FOR THREE YEARS (6th – 8th GRADE)							
	CLASSICAL (OLD)		MODERN (OLD)		CLASSICAL (NEW)		MODERN (NEW)	
SUBJECTS	hrs.	%	hrs.	%	hrs.	%	hrs.	%
NAT. LANG.	11	(15.2)	17	(25.0)	11 ½	(15.5)	17½	(24.0)
SOC. ST.	9	(12.3)	9	(12.6)	9	(12.0)	9	(12.3)
MATH. NAT. SC.	13 ½	(18.5)	13 ½	(19.0)	13 ½	(18.2)	15½	(21.2)
FOR. LANG.	24	(32.8)	16	(22.5)	25½	(34.2)	16	(21.9)
PRACT. W. ART MUS. PHY. ED.	15 ½	(21.2)	15 ½	(21.8)	15	(20.1)	15	(20.6)
TOTALS	73	(100.0)	71	(100.0)	74 ½	(100.0)	73	(100.0)

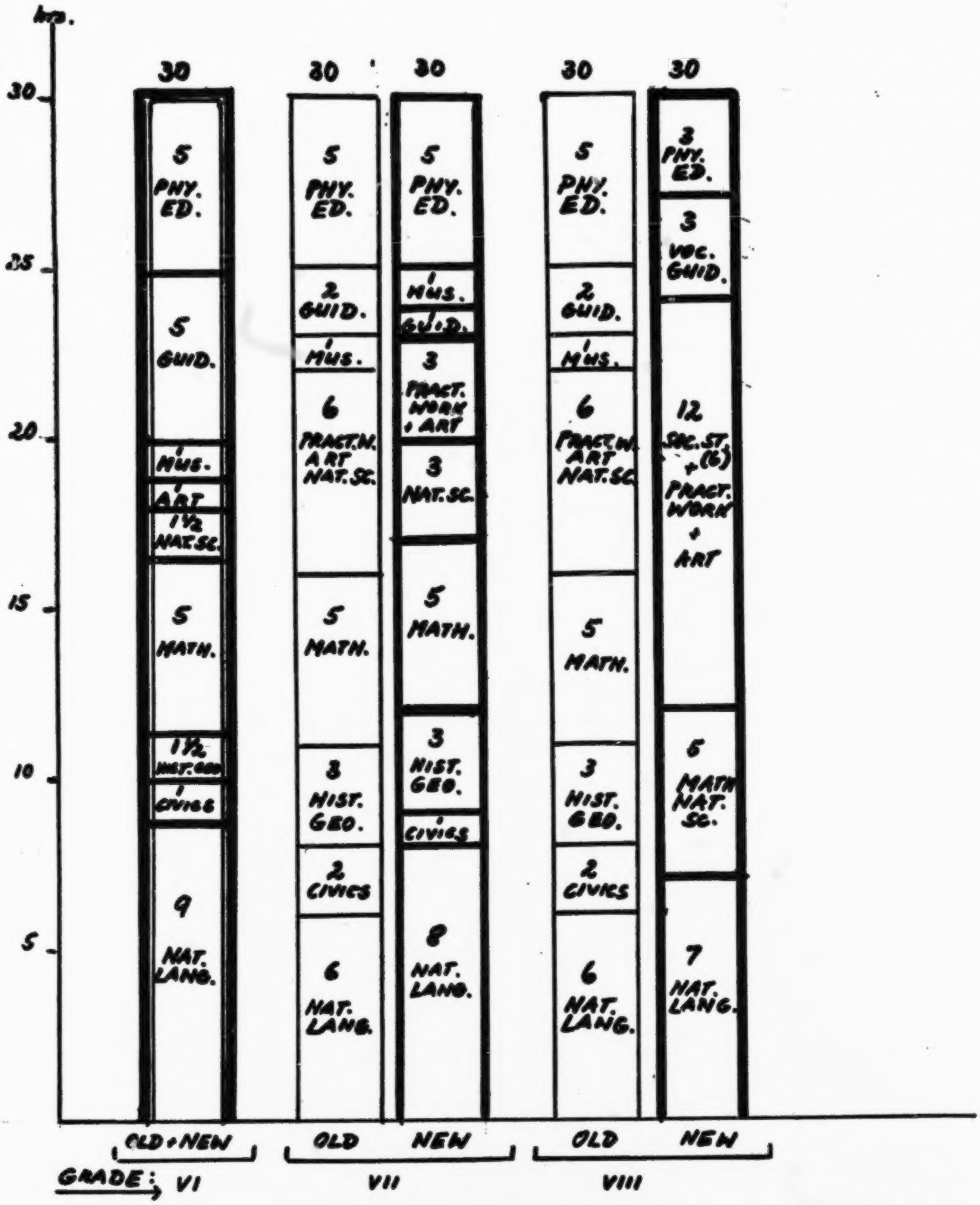
IV. FRANCE - CURRICULUM DEVELOPMENT

SEMI-ACADEMIC SCHOOLS, 1961-1965



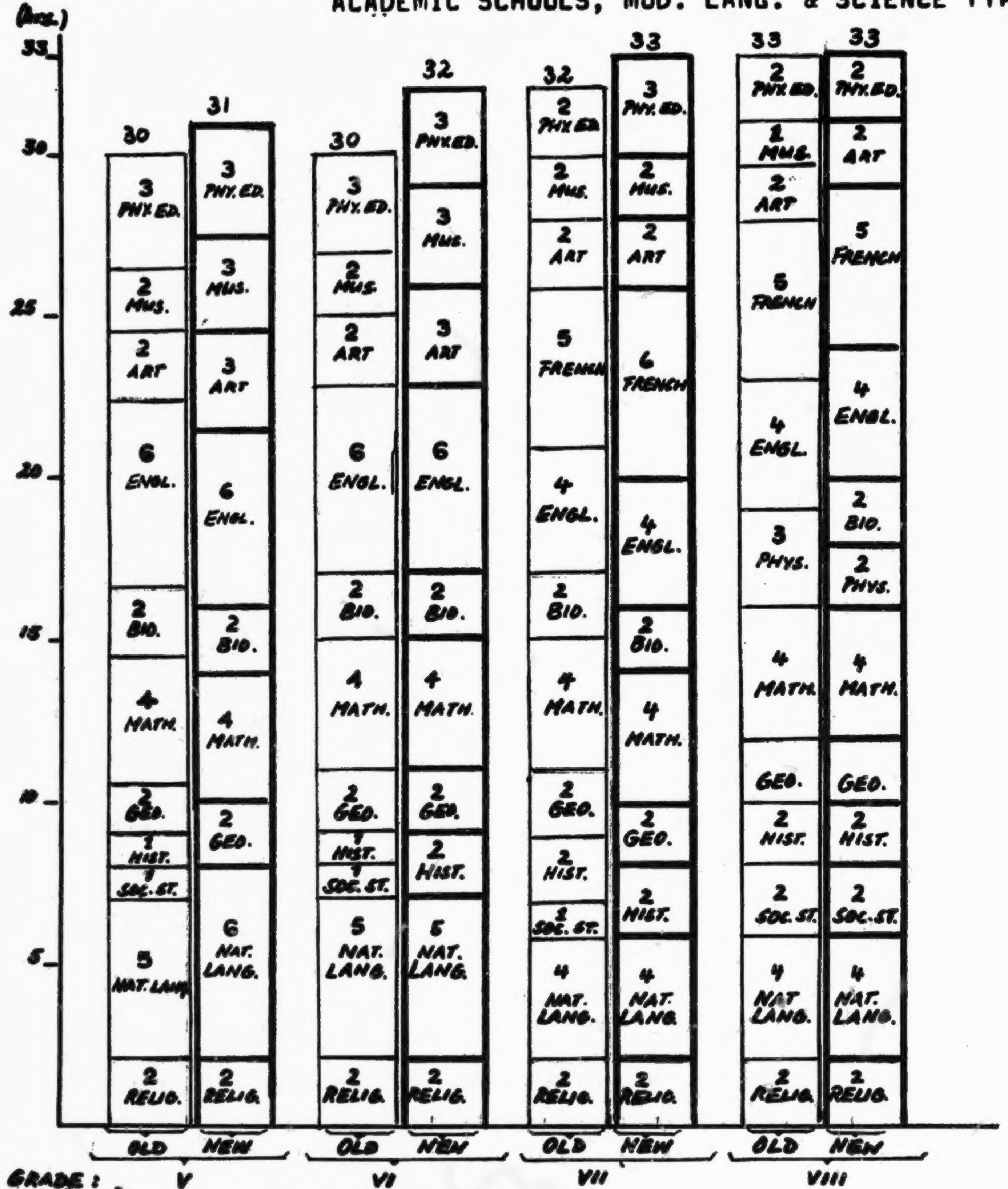
SUBJECTS	SEMI-ACACADEMIC SCHOOLS			
	TOTAL HOURS FOR 3 YEARS (6th - 8th GRADE)			
	OLD: 1961		NEW: 1965	
	HRS.	(%)	(HRS.)	(%)
NAT. LANG.	17	(25.0)	17	(22.6)
SOC. STUD.	9	(13.2)	10	(13.1)
MATH/NAT. SC.	13½	(19.8)	19	(25.0)
FOR. LANG.	13	(19.2)	14	(18.4)
PRACT. WORK	3		3½	
ART	3½	(22.8)	3½ 16	(20.9)
MUS.	3 15½		3	
PHY. ED.	6		6	
TOTALS	68	(100.0)	76	(100.0)

V. FRANCE - CURRICULUM DEVELOPMENT
NON-ACADEMIC SCHOOLS, 1961-1964



SUBJECTS:	TOTAL HOURS FOR 3 YEARS (6th - 8th GRADE) NON-ACADEMIC SCHOOLS			
	OLD : 1961		NEW : 1964	
	HRS.	(%)	HRS.	(%)
NAT. LANG.	21	(23.2)	24	(26.6)
SOC. STUD.	12 ½	(13.9)	12 ½	(13.9)
MATH.	15	(16.7)	15	
NAT. SC.	14 ½	(16.2)	4½ 19½	(21.6)
PRACT. WORK			10	(11.2)
ART				
MUS.	3	(3.3)	2	(2.2)
GUIDANCE	9	(10.0)	9	(10.0)
PHY. ED.	15	(16.7)	13	(14.5)
TOTALS	90	(100.0)	90	(100.0)

VI. GERMANY, HESSE - CURRICULUM DEVELOPMENT 1956/7 - 1961/2
ACADEMIC SCHOOLS, MOD. LANG. & SCIENCE TYPE

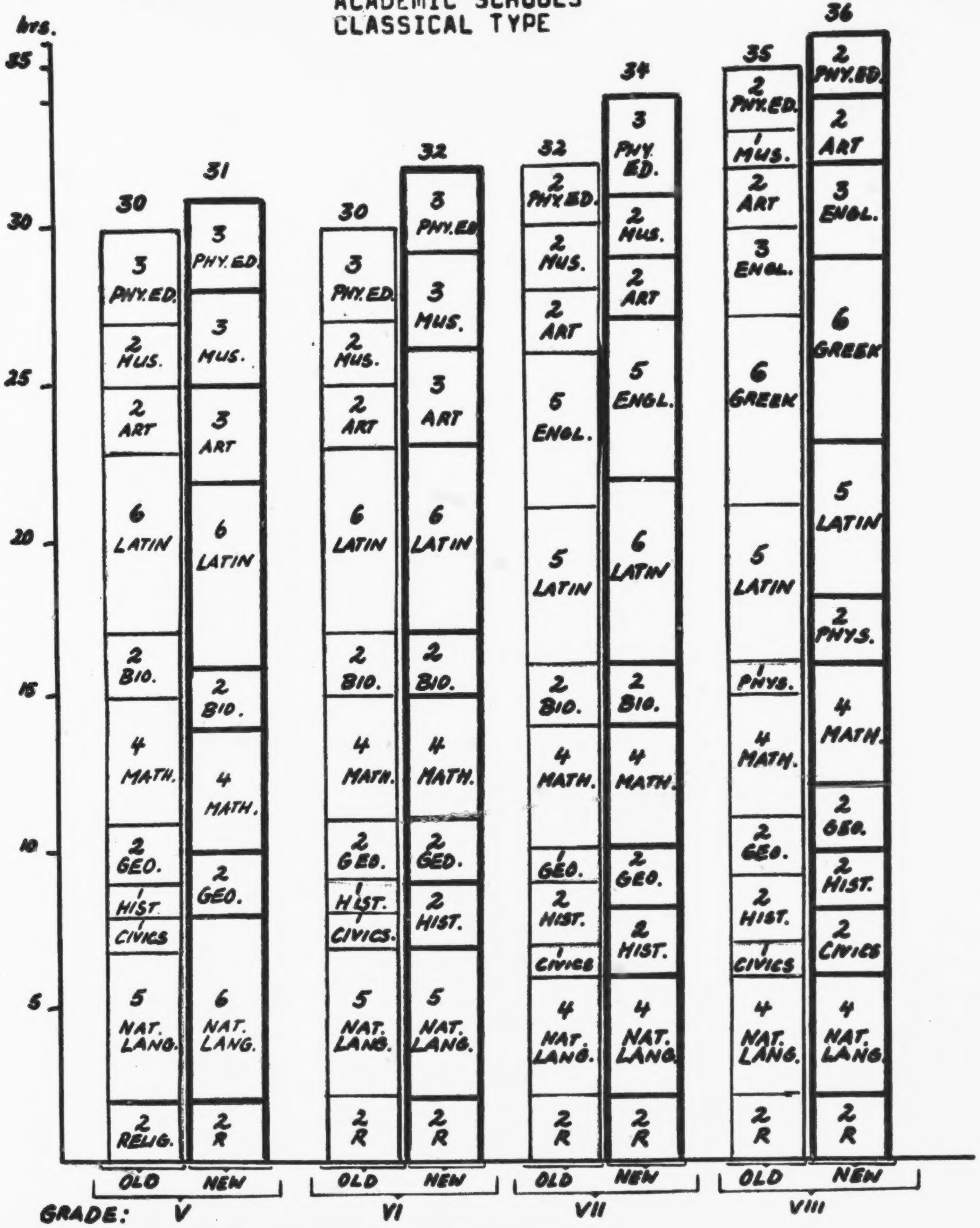


ACDEMIC SCHOOLS,MODERN LANGUAGE AND SCIENCE TYPE

SUBJECTS	TOTAL HOURS FOR 4 YEARS (5th - 8th GRADE)			
	OLD : 1956/7		NEW : 1961/2	
	hrs.	(%)	hrs.	(%)
RELIG.	8	(6.4)	8	(6.2)
NAT. LANG.	18	(14.4)	19	(14.7)
SOC. STUD.	18	(14.4)	16	(12.4)
MATH. NAT. SC.	16 11 } 27	} (21.6)	16 10 } 26	(20.2)
FOR. LANG.	29	(23.2)	31	(24.0)
ART MUS. PHYS. ED.	8 7 10 } 25	} (20.0)	10 8 11 } 29	} (22.5)
TOTALS	125	(100.0)	129	(100.0)

VII. GERMANY, HESSE - CURRICULUM DEVELOPMENT 1956/7 - 1961/2

ACADEMIC SCHOOLS
CLASSICAL TYPE

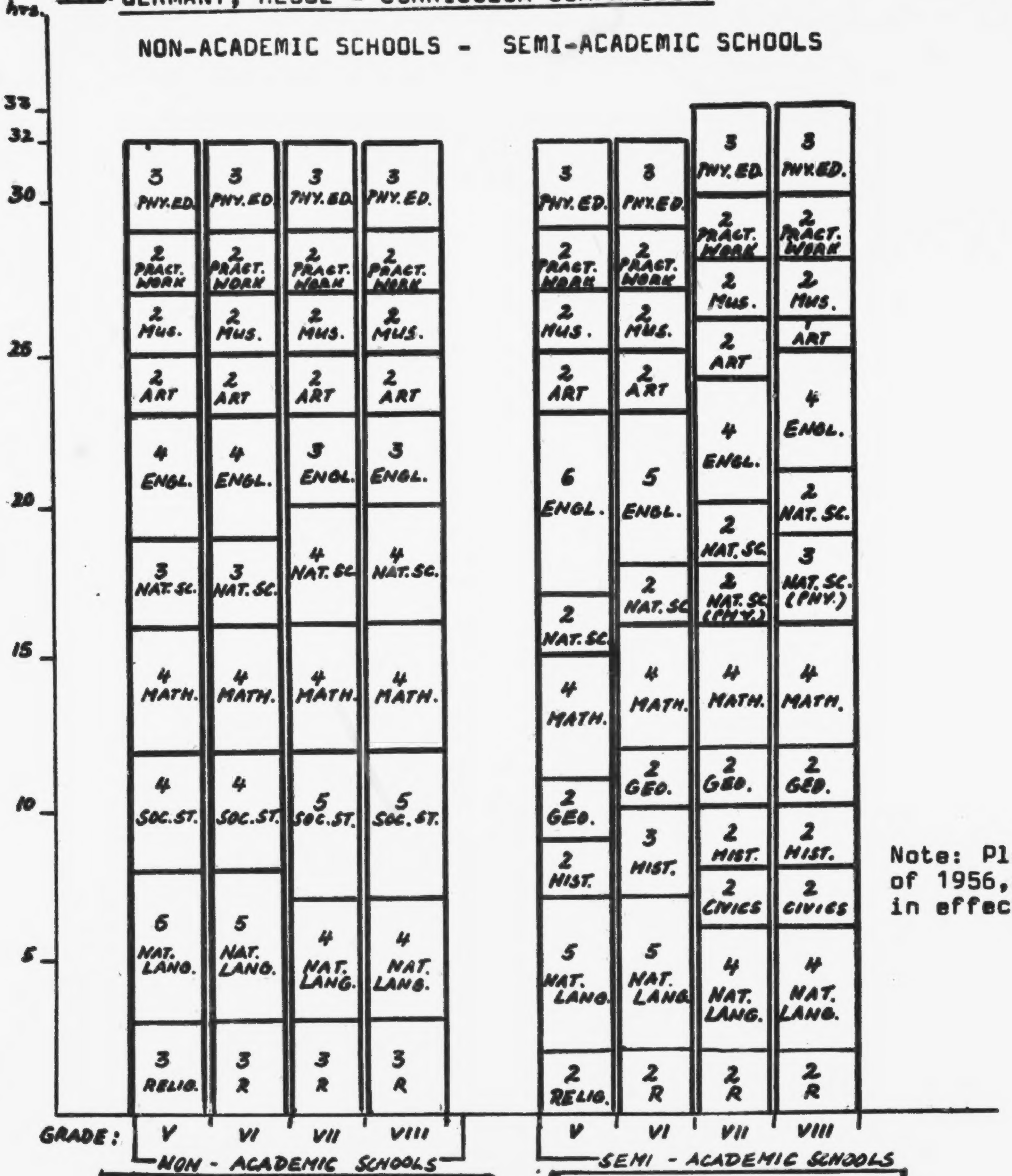


ACADEMIC SCHOOLS, CLASSICAL TYPE

SUBJECTS	TOTAL HRS. FOR 4 YEARS (5th - 8th GRADE)			
	OLD: 1956/7		NEW: 1961/2	
	hrs.	(%)	hrs.	(%)
RELIG.	8	(6.3)	8	(6.0)
NAT. LANG.	18	(14.2)	19	(14.4)
SOC. STUD.	17	(13.4)	16	(12.0)
MATH. NAT. SC.	16 7 } 23	} (18.1)	} 16 8 } 24	(18.0)
FOR. LANG.	36	(28.3)	37	(27.8)
ART MUS. PHY. ED.	8 7 10 } 25	} (19.7)	10 8 11 } 29	} (21.8)
TOTALS	127	(100.0)	133	(100.0)

VIII. GERMANY, HESSE - CURRICULUM COMPARISON:

NON-ACADEMIC SCHOOLS - SEMI-ACADEMIC SCHOOLS



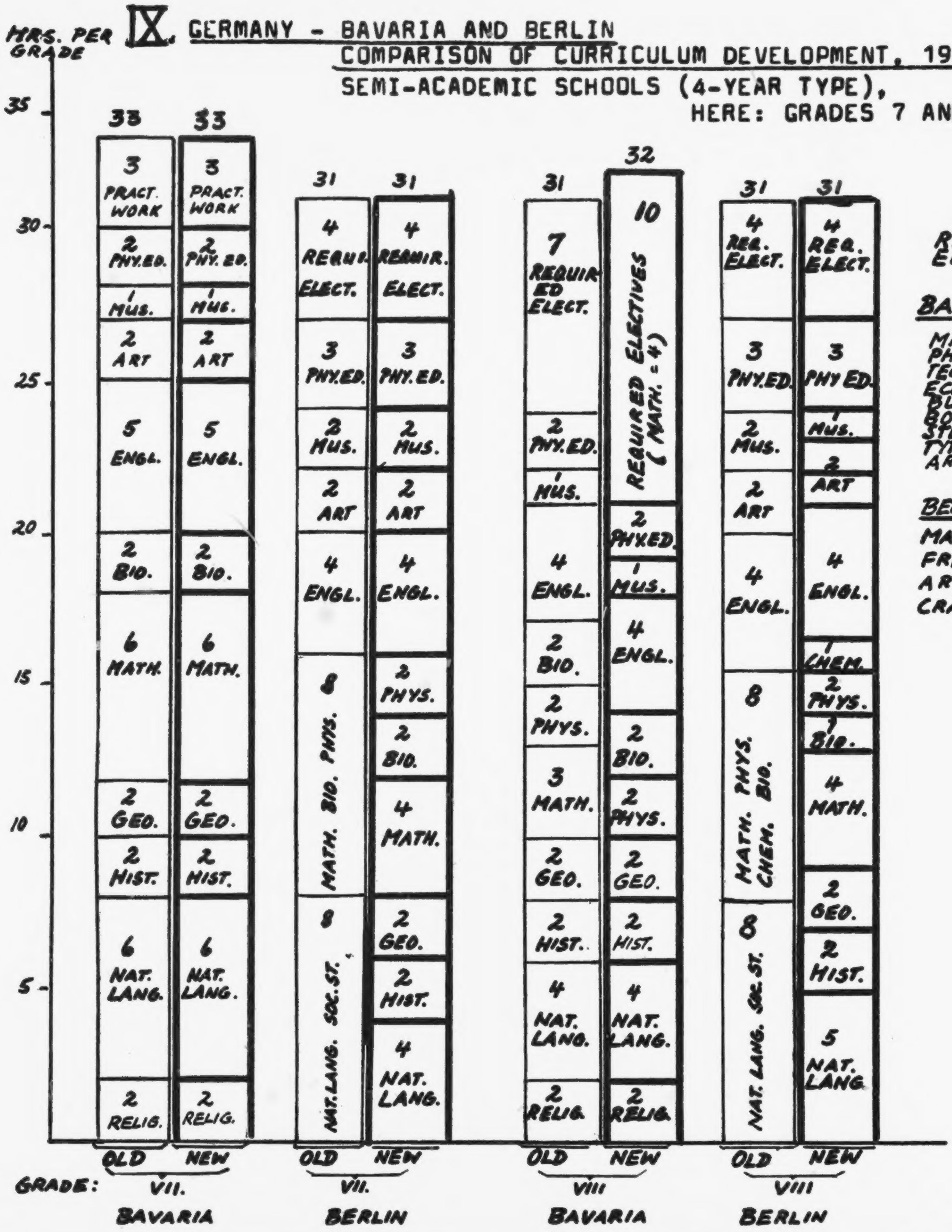
Note: Plans of 1956, still in effect.

TOTAL HRS. FOR 4 YEARS		← SUBJECTS →	TOTAL HRS. FOR 4 YEARS	
hrs.	(%)		hrs.	%
12	(9.4)	RELIG.	8	(6.2)
18	(14.1)	NAT. LANG.	18	(13.9)
18	(14.1)	SOC. STUD.	21	(16.1)
30	(23.4)	MATH. NAT. SC.	29	(22.3)
14	(10.9)	FOR. LANG.	19	(14.6)
16 8 12 } 36	(28.1)	PRACT. WORK ART MUS PHY. ED.	15 8 12 } 35	(26.9)
128	(100.0)	← TOTALS →	130	(100.0)

IX. GERMANY - BAVARIA AND BERLIN

COMPARISON OF CURRICULUM DEVELOPMENT, 1960-1965

SEMI-ACADEMIC SCHOOLS (4-YEAR TYPE),
HERE: GRADES 7 AND 8



REQUIRED ELECTIVES:

BAVARIA:

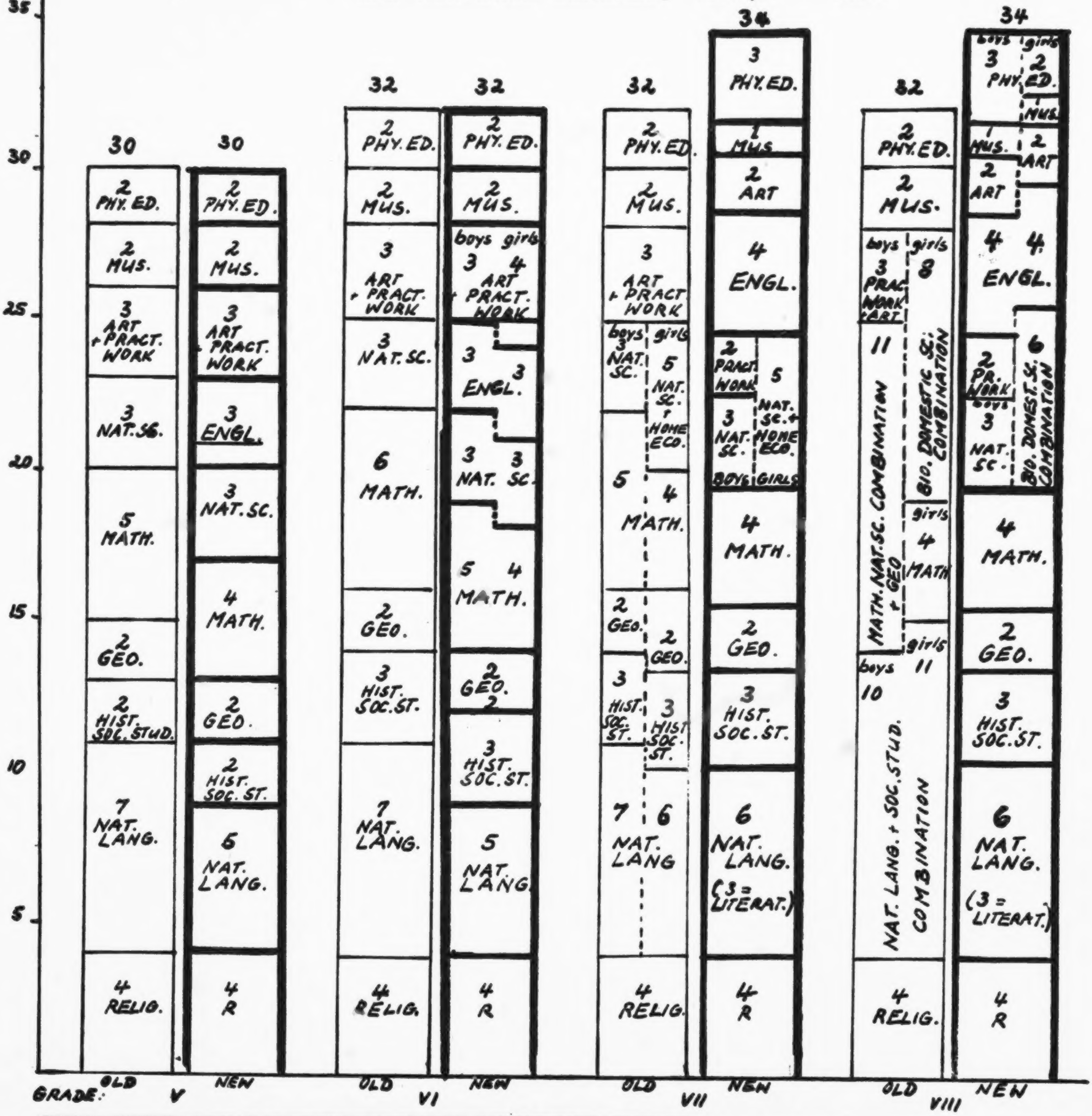
MATHEM.
PHYSICS
TECHN. DRAWING
ECONOMICS
BUSIN. MATH.
BOOKKEEPING
STENOGRAPHY
TYPING
ART

BERLIN:

MATHEM. / SCI.
FRENCH
ARTS
CRAFTS

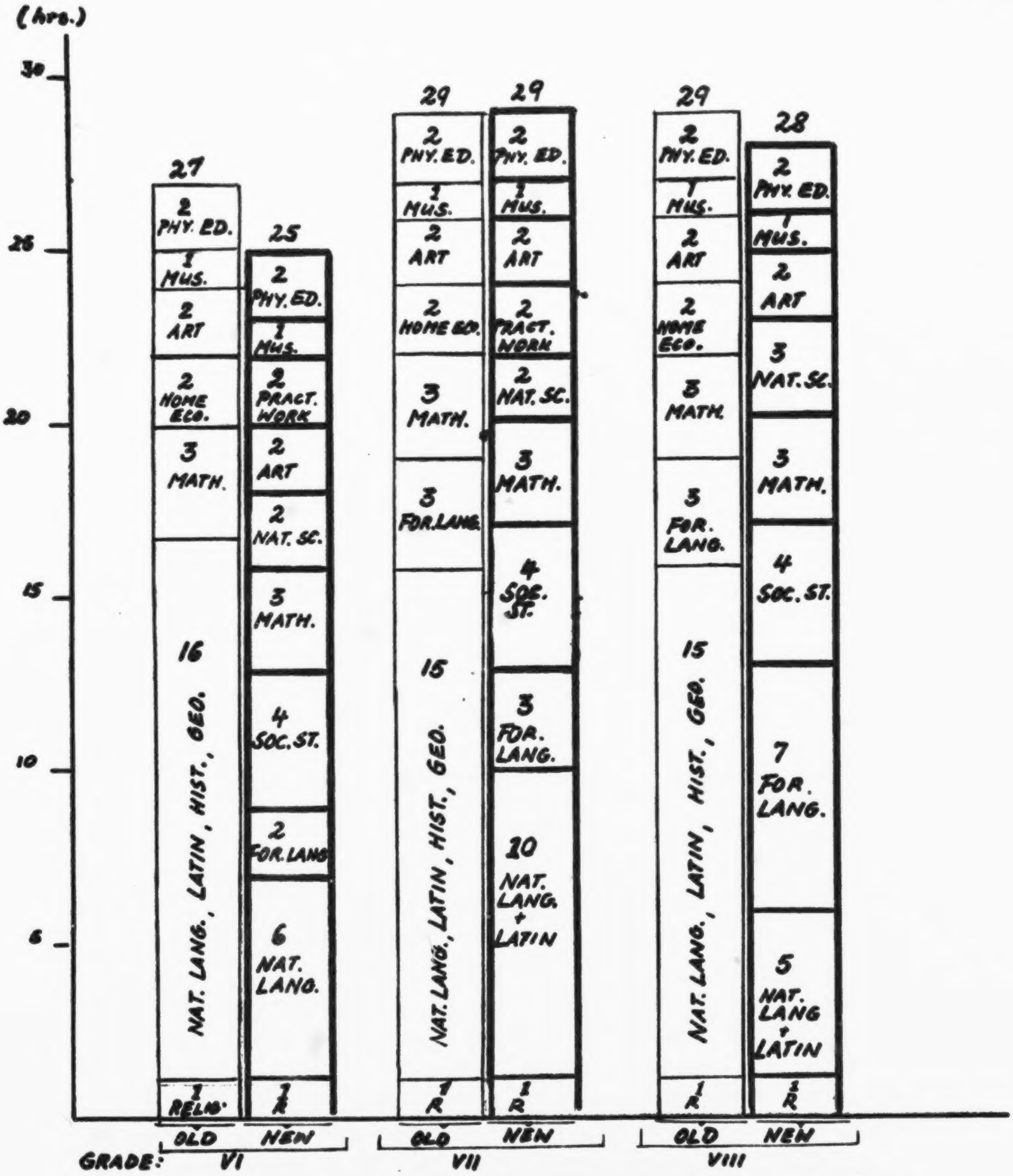
SUBJECTS:	TOTAL HOURS FOR 2 YEARS (7th - 8th GRADE)							
	BAVARIA				BERLIN			
	OLD: 1961		NEW: 1965		OLD: 1960		NEW: 1965	
	HRS.	(%)	HRS.	(%)	HRS.	(%)	HRS.	(%)
NAT. LANG.	10	(15.6)	10	(15.6)	} 16	(25.8)	9	(14.5)
SOC. STUD.	8	(12.5)	8	(12.5)			8	(12.9)
MATH. / NAT. SC.	15	(23.4)	12	(18.8)	16	(25.8)	16	(25.8)
FOR. LANG.	9	(14.0)	9	(14.0)	8	(12.9)	8	(12.9)
REL. MUS. ART. PHY. ED.	15	(23.5)	15	(23.5)	14	(22.6)	13	(21.0)
REQU. ELECT.	7	(9.1)	10	(15.6)	8	(12.9)	8	(12.9)
TOTALS	64	(100.0)	64	(100.0)	62	(100.0)	62	(100.0)

X. GERMANY, NORTHRHINE-WESTPHALIA - CURRICULUM DEVELOPMENT, NON-ACADEMIC SCHOOLS, 1956/7 - 1966



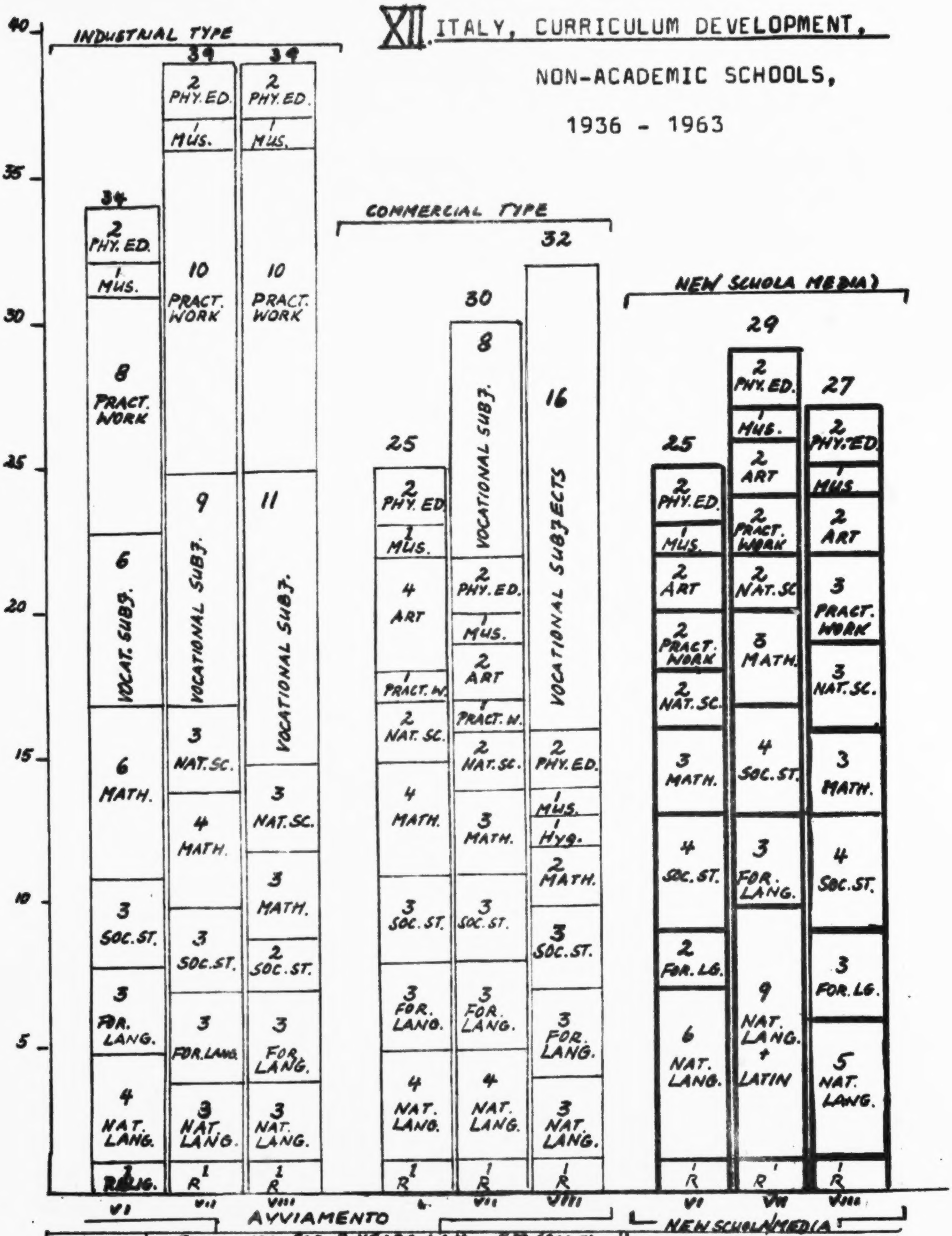
SUBJECTS	TOTAL HOURS FOR 4 YEARS (5th - 8th GRADE)							
	OLD = 1956/7				NEW = 1962/6			
	BOYS		GIRLS		BOYS		GIRLS	
	hrs.	%	hrs.	%	hrs.	%	hrs.	%
RELIG.	16	(12.7)	16	(12.7)	16	(12.3)	16	(12.3)
NAT. LANG.	28	(22.6)	26	(20.6)	22	(16.9)	22	(16.9)
SOC. STUD. (+ GEO.)	11 8 }19	(15.1)	11 8 }19	(15.1)	19	(14.6)	19	(14.6)
FOR. LANG.	—	—	—	—	14	(10.8)	14	(10.8)
MATH.	23	(18.2)	21	(16.6)	17	(13.1)	16	(12.3)
NAT. SC.	12 }24	}(19.0)	}28	}(22.2)	12	(9.2)	}17	}(13.1)
PRACT. W. ART	12				}14	}(10.8)	}11	}(8.7)
MUS. PHY. ED.	8 8 }16	}(6.4)	8 8 }16	}(6.4)	6 10 }16	}(12.3)	}15	}(11.5)
TOTALS	126	(100.0)	126	(100.0)	130	(100.0)	130	(100.0)

XI. ITALY, CURRICULUM DEVELOPMENT - ACADEMIC SCHOOLS 1944/53-1963



SUBJECTS	TOTALS FOR (3) THREE YEARS (6th - 8th GRADE)							
	OLD (1954/53)				NEW (1963)			
	hrs.		%		hrs.		%	
RELIG.	3		(3.6)		3		(3.7)	
NAT. LANG.	16		(18.8)		17		(20.7)	
FOR. LANG.	24		(28.3)		15		(18.3)	
SOC. STUD.	12		(14.1)		12		(14.6)	
MATH, NAT. SC.	9		(10.6)		16		(19.5)	
ART	6	21	(7.0)	(24.6)	6	19	(7.3)	(23.2)
PRACT. W.	6		(7.0)		4		(4.9)	
MUSIC	3		(3.6)		3		(3.7)	
PHY. ED.	6		(7.0)		6		(7.3)	
TOTALS	85		(100.0)		82		(100.0)	

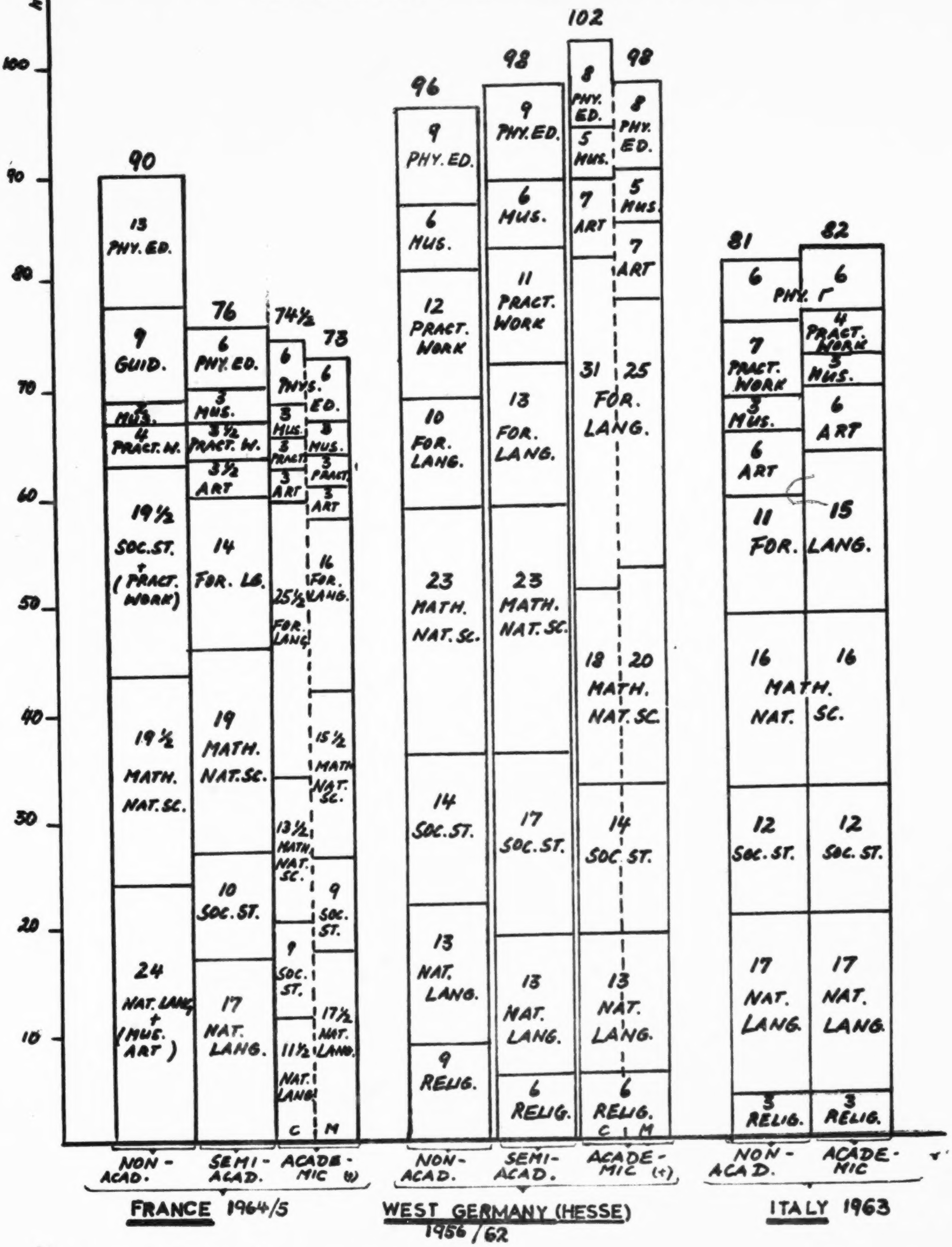
XII ITALY, CURRICULUM DEVELOPMENT, NON-ACADEMIC SCHOOLS, 1936 - 1963



SUBJECTS	TOTAL HRS. FOR 3 YEARS (6th - 8th GRADE)							TOTAL HRS. FOR 3 YEARS		
	INDUSTRIAL: 1947/58				COMMERCIAL: 1936/58			1963		
	hrs.		%		hrs.		%	hrs.		%
RELIG.	3		(2.7)		3		(3.5)	3		(3.7)
NAT. LANG.	10	19	(16.9)		11	20	(23.0)	20	28	(34.5)
FOR. LANG.	9				9			8		
SOC. STUD.	8		(7.2)		9		(10.3)	12		(14.8)
MATH. NAT. SC.	19		(16.9)		14		(16.1)	16		(19.8)
VOC. ED.	26		(23.2)		24		(27.6)	–		
PRACT. WORK	28	37	(25.0)	(33.1)	2	17	(19.5)	7	22	(27.2)
ART	–		–		6			6		
MUS.	3		(2.7)		3			3		
PHY. ED.	6		(5.4)		6			6		
TOTALS	112		(100.0)		87		(100.0)	81		(100.0)

XIII. FRANCE, WEST GERMANY, ITALY - ALL SCHOOL TYPES

DISTRIBUTION OF ACADEMIC AND NON-ACADEMIC SUBJECTS IN TOTAL HOURS FOR GRADES 6, 7, AND 8



(+) ACADEMIC SCHOOLS: C = CLASSICAL TYPE
M = MODERN LANGUAGE AND SCIENCE TYPE

XIV. FRANCE, WEST GERMANY (HESSE), ITALY - ALL SCHOOL TYPES -

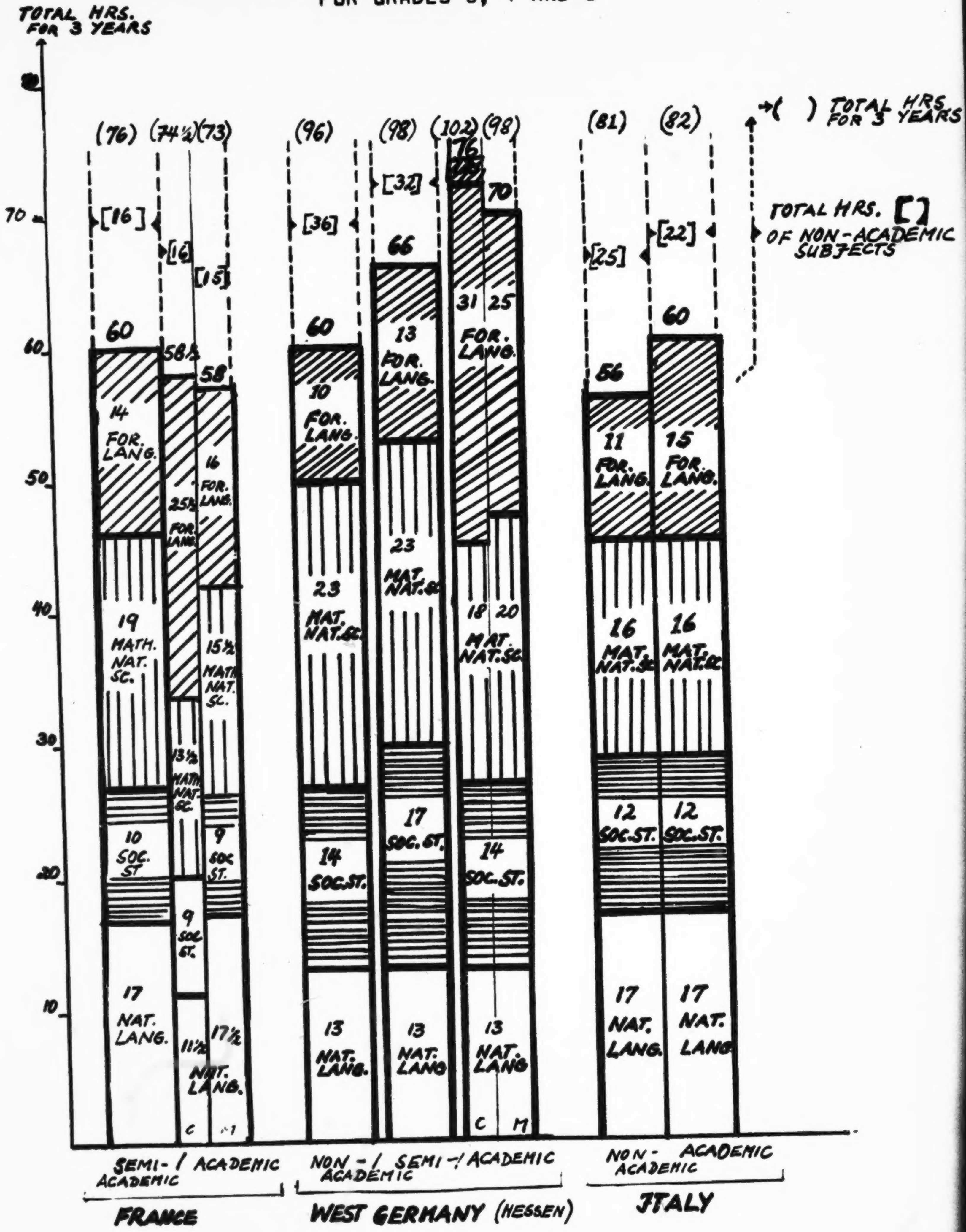
DISTRIBUTION OF SUBJECTS IN % FOR GRADES 6, 7 AND 8.

SUBJECTS	TOTAL HOURS IN % FOR 3 YEARS (6th - 8th GRADE)									
	FRANCE				WEST GERMANY (HESSE)				ITALY	
	NON-ACAD. SCHOOLS	SEMI-ACAD. SCHOOLS	ACADEMIC SCH.		NON-ACAD. SCHOOLS	SEMI-ACAD. SCHOOLS	ACADEM. SCH.		NON-ACAD. SCH.	ACADEM. SCHOOLS
			C	M			C	M		
NAT. LANG.	26.6	22.6	15.5	24.0	13.5	13.3	12.7	13.3	21.0	20.7
SOC. STUD.	13.9	13.1	12.0	12.3	14.6	17.3	13.7	14.3	14.8	14.6
MATH./NAT. SC.	21.6	25.0	18.2	21.2	24.0	23.5	17.7	20.4	19.8	19.6
FOR. LANG.	-	18.4	34.2	21.9	10.4	13.3	30.4	25.5	13.6	18.3
TOTALS OF ACADEMIC SUBJ.	62.1	79.1	79.9	79.4	62.5	67.4	74.6	73.5	69.2	73.2
TOTALS OF NON ACAD. SUBJ.	37.9	20.9	20.1	20.6	37.5	32.6	25.5	26.5	30.8	26.8
TOTALS FOR 3 YEARS	(=100.0) (= 90)	100.0 (= 76)	100.0 (=74½)	100.0 (= 73)	100.0 (= 96)	100.0 (= 98)	100.0 (=102)	100.0 (=98)	100.0 (=81)	100.0 (= 82)

PRACT. WORK
MUS./ART
PHS. ED./
RELIG.

XV. FRANCE, WEST GERMANY, ITALY - ALL SCHOOL TYPES

DISTRIBUTION OF ACADEMIC SUBJECT GROUPS IN TOTAL HOURS FOR GRADES 6, 7 AND 8



XVI. FRANCE, WEST GERMANY, ITALY – ALL SCHOOL TYPES –

COMPARISON OF TOTAL HOURS PER GRADE WITH PROPORTIONS OF ACADEMIC VS. NON-ACADEMIC SUBJECTS.